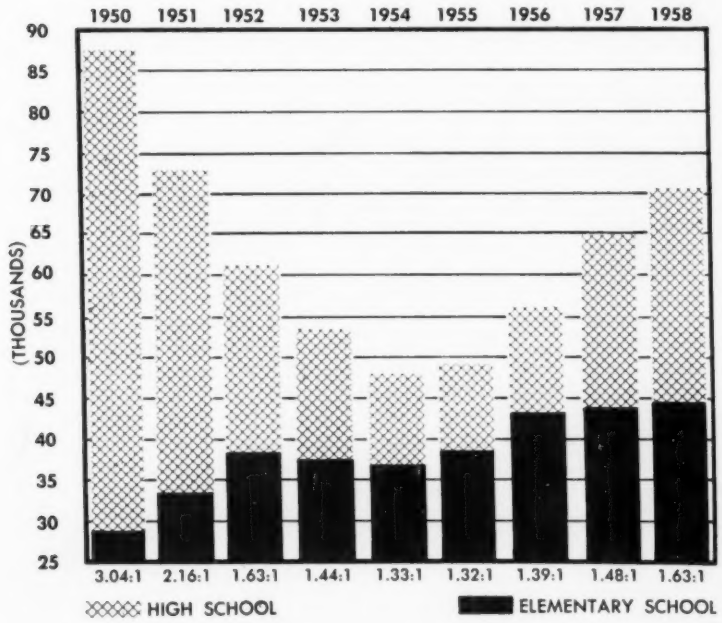
the AMERICAN SCHOOL BOARD JOURNAL

WANTED: More Grade Teachers —

The growing imbalance between graduates prepared for high school and grade school teaching. . . . a serious complication in teacher supply and demand (see pg. 31).



MAY, 1958

GUARANTEED SATISFACTION

All folding furniture and all school furniture manufactured by Virco Manufacturing Corporation, is always sold on the basis of guaranteed satisfaction. This is equally true in the two pieces of specialized school furniture shown here. The new Virco #700 series combination desk and classroom table offers the greatest possible versatility in school furniture on the market today. Its unique height adjustment feature affords complete adaptability for use from Kindergarten through College. The new Virco #260 chair featuring modern contemporary design is posture-perfect engineered to School Board specifications. This well-constructed chair is available in eight seat heights from 11" to 18", making it ideal for any classroom. For information on the complete Virco School Furniture line, write for free brochure to: Virco Manufacturing Corporation, P.O. Box 44846, Station "H" Los Angeles, California or Virco Manufacturing Corporation, Conway, Arkansas.

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DEL E. WEBB CONSTRUCTION CO.
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FRANK HARMONSON COMPANY
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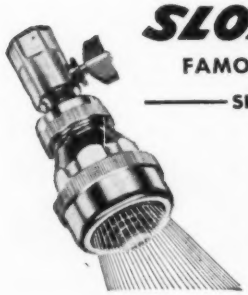
• PHOENIX, ARIZONA, is basking in a limelight created by the new multi-million dollar cooperative apartment building, PHOENIX TOWERS. In the four 14-story wings are 60 spacious apartments surrounding a center core which houses elevators and stairs, with front and rear entrances to all apartments. Residents do not completely enter the building proper until they turn keys in their own doors. The building has a reinforced concrete skeleton. All enclosing walls and many interior walls are fireproof. Sound deadening materials were used throughout. Individual air conditioning and heating equipment is adjacent to each home. For the enjoyment of all the tenant-owners there is a large swimming pool with private cabanas, and a children's play area in a garden-like patio. Atop the building is a covered roof terrace. An underground garage provides space for 120 cars. For this building, which demonstrates superlative planning, SLOAN *Flush* VALVES were specified.



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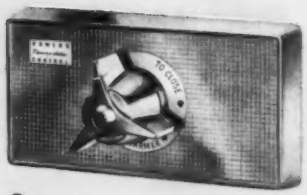
If you would like a demonstration like that in the above photograph, contact us today. We have just produced a sound-and-color-slide film titled "Safe Shower Systems." It gives the facts on shower safety and shower economics. We'll be glad to show it to you.



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SPECIALISTS IN THERMOSTATIC CONTROL SINCE 1891

THE AMERICAN
School Board Journal
for May, 1958

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OUR COVER . . .

The missing grade teacher and the accompanying graph dramatically illustrate that we are not now graduating enough teachers prepared for elementary school work. This is a serious complication in the teacher supply and demand picture for the fall of 1958, as analyzed by Dr. Maul for the NEA (page 31).

A review of your JOURNAL for May (pg. 4) ⟶

WILLIAM C. BRUCE, Editor
Published on the 25th of the month preceding the date of issue by THE BRUCE PUBLISHING COMPANY, 400 North Broadway, Milwaukee 1, Wisconsin. CENTRAL OFFICE: 20 North Wacker Drive, Chicago 6, Illinois. EASTERN OFFICE: 233 Broadway, New York 7, New York.

THE AMERICAN SCHOOL BOARD JOURNAL, A Periodical of School Administration, May, 1958, Vol. 136, No. 5. Copyright, 1958, by The Bruce Publishing Company.— All rights reserved. Title registered as Trade Mark in the United States Patent Office. Entered as Second-Class Mail Matter, March 17, 1891, at the Post Office at Milwaukee, Wis., under the Act of March 3, 1879.

Best way to fence a playground

USS Cyclone Fence

Cyclone Fence is a wise choice to enclose school playgrounds—especially where small children must play unsupervised.

With Cyclone Fence on guard the children stay inside the yard. Cyclone Fence is so constructed that the most adventuresome youngster will find it almost impossible to go under or over it. And that means that undesirable people and stray dogs will find it just as difficult to get in. The children play safely behind a Cyclone Fence.

Cyclone Fence is strong and tough. It will give years of service with a minimum of maintenance. That sturdy Cyclone Chain Link Fabric can take years of playtime abuse without serious effect, and its smooth galvanized finish has no sharp points to injure playing children or tear their clothes.

If you are building a new school or considering new fence for an older one, investigate Cyclone. Just send in the convenient coupon for complete information on all types of Cyclone Fence and Gates.

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Your JOURNAL *for May*

"How can we build a good school at less cost?" is the substance of questions asked us in many letters. While we wished we knew a clever scheme — a new design or construction material — that would assure the school builder of major savings and that we could confide to you, authorities tell us that careful planning and utilization of every source of school building economy is the only sure way to create a sanely-designed, low-cost school.

In your JOURNAL for May, we are beginning an eight-part inventory of basic suggestions for school building economy. This comprehensive list was compiled by Dr. Boles, analyzed by a jury of school plant experts, and then rated for proven worth by builders of nationally recognized "low-cost" schools.

We believe you will find these money-saving tips valuable in your school construction program. Undoubtedly, you are using some of them, but many will provide you with new guides toward stretching that limited school building dollar for all it's worth!

Part 1 of the series (page 52) considers the administrators' (school board members and executive staff) role in reducing school costs.

Other articles in this month's school building section:

1. The story of how one district decided to save its ideally located but educationally obsolete older school (page 48) that tells you what materials were used and what costs were involved in the renovation;

2. A review of the new Kewanee, Ill., high school (page 45) that supplies you with the details of a compact, core-curricula secondary school in a central building — a particulary good example of thoughtful and appropriate design and economical construction without sacrifice of facilities for a modern curriculum.

And the May *School Products Guide* considers the basic trends in equipment for the play areas of elementary and secondary school sites (page 84) along with a listing of literature available on the subject — all toward helping you with your school plant problems!

We feel that your May JOURNAL has other features — as well as the regular departments — that deserve your special reading attention. In paging through the issue, however, we hope that you will stop to read the rebuttal (page 29) of Peter Prouse of the NSBA staff to charges that local control of our schools is an "obstacle" to improvement of our education system in times of national crises. It's a vital answer to current, serious charges of school board inadequacy!

for June . . .

Los Angeles, in recruiting over 4000 teachers a year, has developed a well-rounded teacher recruitment program. Dr. Brown, associate superintendent there, has written a review of their program which you're sure to find jammed with ideas that could be adapted to your own district!

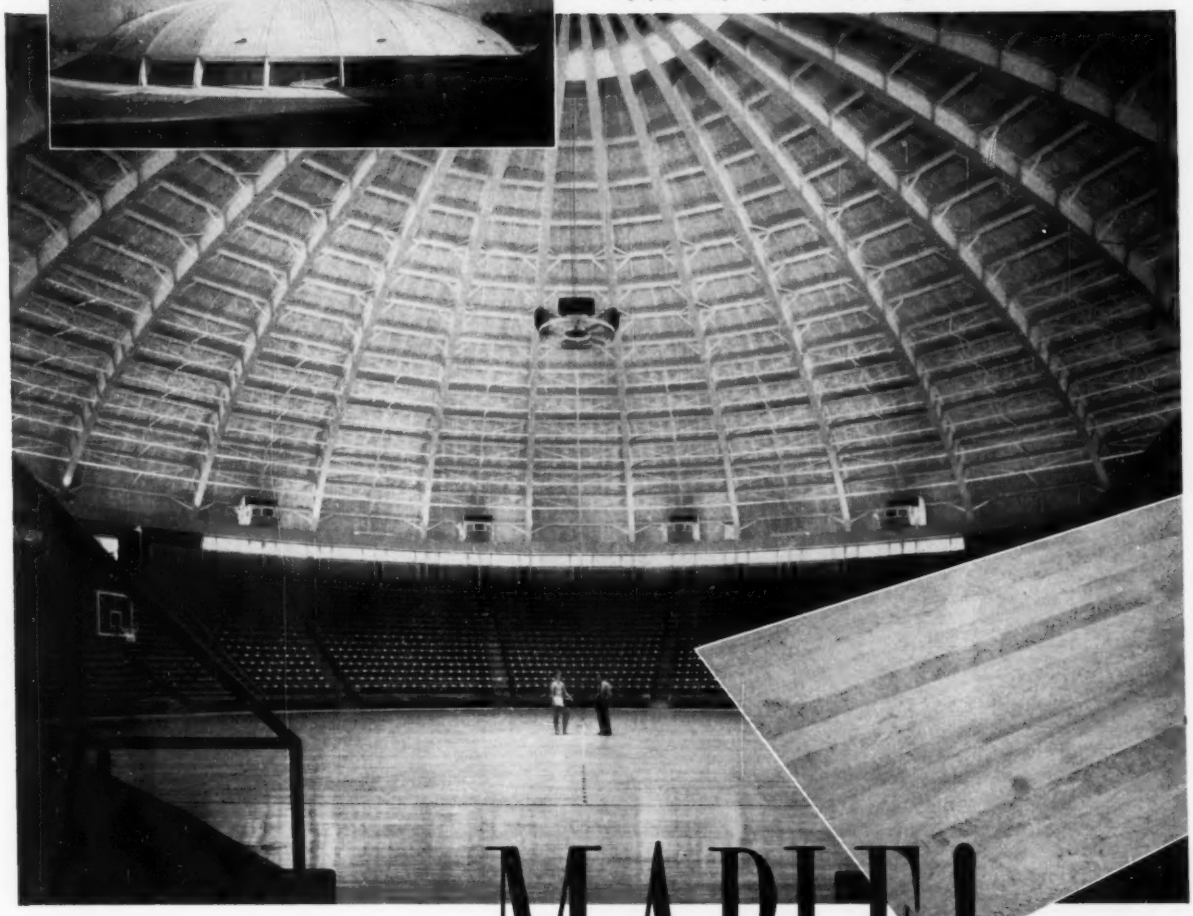
SUBSCRIPTIONS. In the United States, Possessions, and Canada, $4.00 a year, payable in advance. Two-year subscriptions will be accepted at $6.00. In all foreign countries, $4.50; two years at $7.00. Single copies, 50 cents.

DISCONTINUANCE. Notice of discontinuance of subscription must reach the Publication Office in Milwaukee at least 15 days before expiration date.

CHANGE OF ADDRESS. When you have a change of address kindly report it to us at once. Send us your old as well as your new address and be sure the Postmaster is notified. Postal regulations restrict forwarded service on magazines to two issues only.

EDITORIAL MATERIAL. Manuscripts and photographs bearing on school administration, superintendence, school architecture, and related topics are solicited and will be paid for upon publication. Contributions should be mailed to Milwaukee direct and should be accompanied by return postage if unsuitable. The contents of this issue are listed in the "Education Index."

Georgia Institute of Technology Sports Arena. Architect, Aeck Associates, Atlanta. Photographs, courtesy Joseph W. Molitor, Ossining, N. Y.



Naturally it's MAPLE!

The bright, light-reflecting tone and gorgeous grain of Northern Hard Maple are truly matchless. This is First Grade — the best standard grade—of "the finest floor that grows."

in Georgia Tech's spectacular, new Alexander Memorial Physical Education Center.

Furthermore—*it's genuine Northern Hard* MAPLE

Coaches and physical education men emphatically endorse *only maple* for gymnasium floors. (Write for Survey.) Their judgment demands respect. Northern *climate* causes the slow, slow growth of the northern hard maple tree (*Acer saccharum*). If the flooring mill has indented the trademark MFMA on the back of the strip, that's your guarantee of genuine northern-grown maple—by long odds the finest floor that grows. Soft (or mixed) species maple or lesser woods, *cannot* serve you so well or so long. There's a *value* difference no price-paring can ever justify.

Gymnasium floors of N. H. maple are "buying themselves" in many schools, with fees from roller skating and community meeting rentals. Maintenance reported no big problem. Write—

the finest floor that grows

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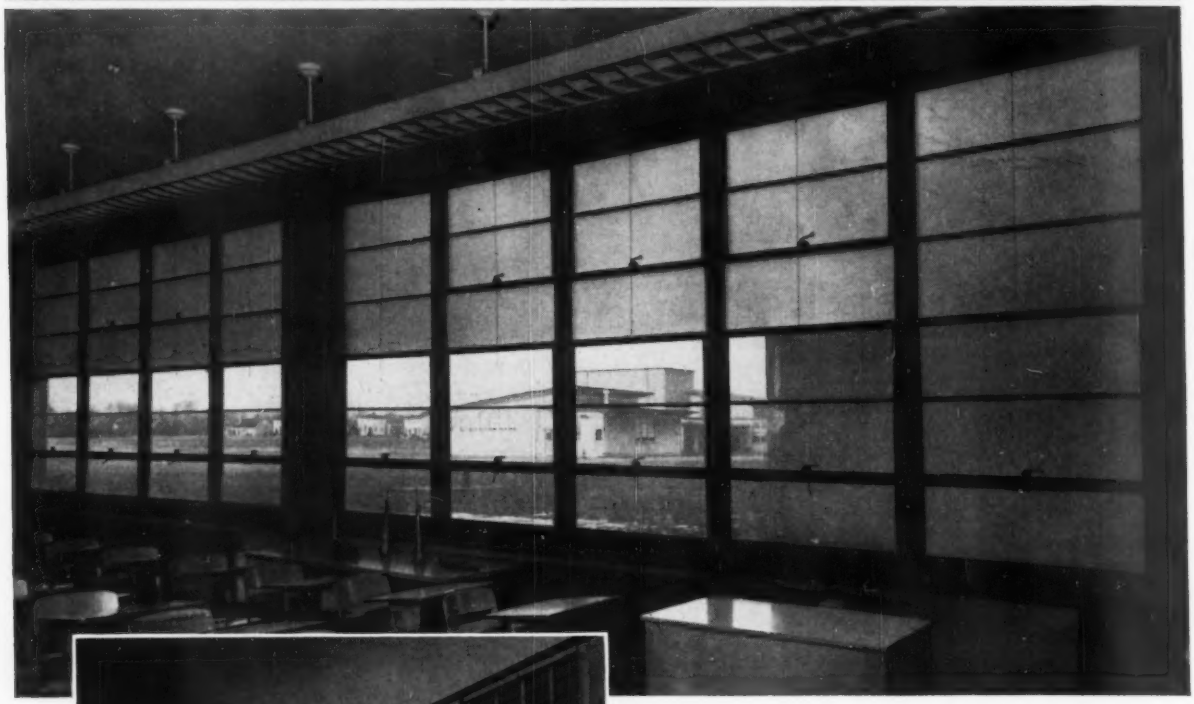
COOLITE GLASS

takes the *Squint* out of Sunshine



Architect: Harstern, Louis and Henry, A.I.A., Louisville, Kentucky

Glazing: Central Glass Company, Louisville, Kentucky

Students at the new Mayme S. Waggener Jr. High School, Louisville, Kentucky, enjoy plenty of southern sunshine without fatiguing glare or undue solar heat. Mississippi Coolite, installed in the upper three rows of sash, floods classrooms with copious quantities of conditioned daylight, removes the unwanted elements of "raw" sunlight . . . diffuses comfortable, softly-tinted, eye-easy illumination throughout interiors. Students see better, feel better, work better under Coolite . . . the versatile glass that makes rooms seem larger, friendlier, helps achieve an atmosphere more conducive to concentration and study.

When you build or remodel your schools, consider the superior properties of Coolite, heat absorbing glass. Take advantage of Mississippi's continuing studies in school daylighting, conducted under actual classroom conditions. Assistance is offered without charge or obligation.

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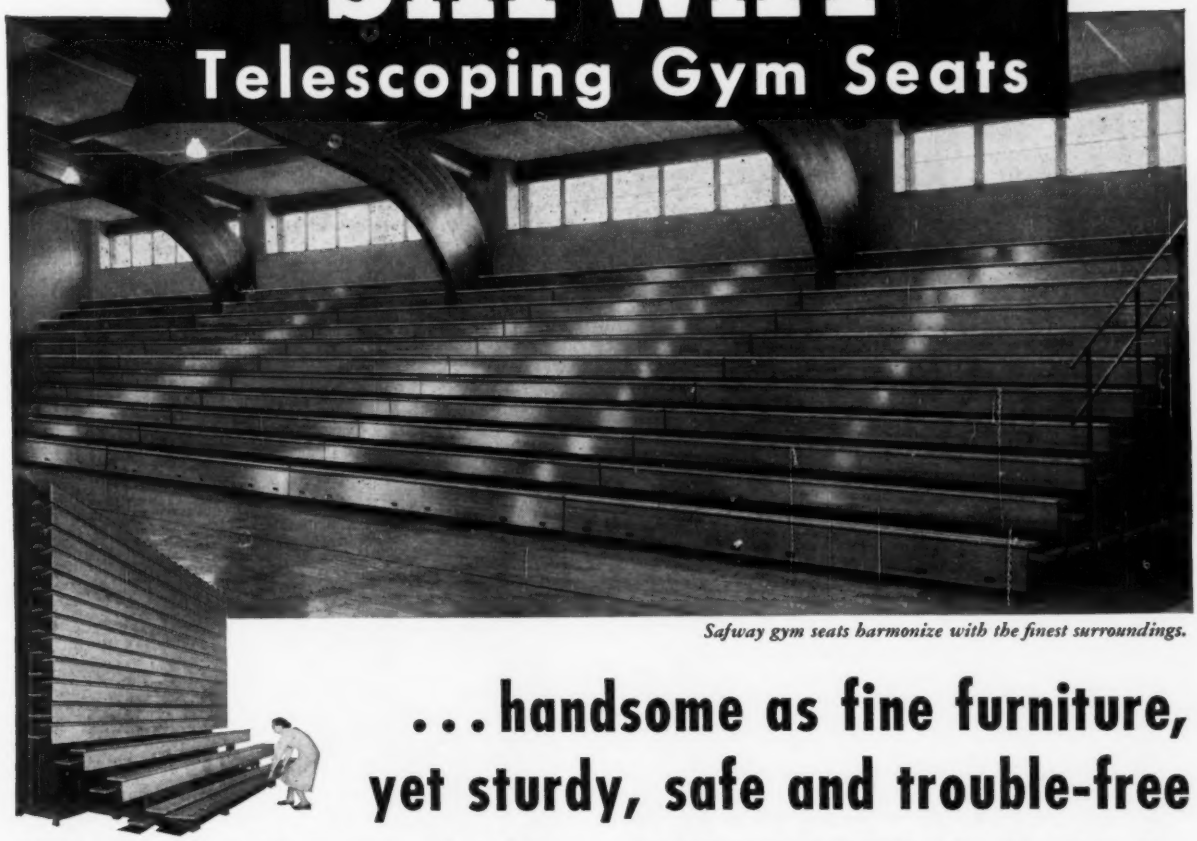

Safway gym seats harmonize with the finest surroundings.

. . . handsome as fine furniture, yet sturdy, safe and trouble-free

YOU'LL really be proud of the appearance of your Safway gym seats . . . proud as you are of the superior vision, comfort and safety they provide for your spectators.

Extended or closed, the all-steel supporting structure is concealed under beautifully finished wood seat boards, foot boards and risers. The handsome natural grain shows through clear varnish, tinted to the rich, warm tone of Golden Oak.

When not in use, Safway gym seats telescope back into a self-contained "cabinet." Riser boards then line up vertically like fine wood panelling to give your gymnasium a clean, finished appearance.

You also benefit through important mechanical advantages built into Safway gym seats:

ALL WOOD IS SPECIALLY FINISHED

Seat, foot and riser boards are laminated Douglas Fir, selected to virtually eliminate cracking or splintering. Boards are carefully sanded and eased on all sides, with corners rounded. There are no sharp projections. Hand holds in the front riser board are smoothly rounded.

For fine appearance and durability, boards are treated with Safway's high quality base sealer and finished in clear Golden Oak varnish. The finish is rich but scuff-resistant . . . lustrous but not slippery . . . easy to keep clean. It will harmonize with the finest surroundings.

COMPLETE SPECTATOR COMFORT — Excellent sight lines from every seat. Extra-wide seat and foot boards; ample foot and leg room.

SMOOTH, EASY OPERATION—Safway telescoping principle eliminates binding, minimizes friction. No costly power equipment needed.

STRONG, RIGID CONSTRUCTION—Steel, not wood, carries the load. 8 steel columns under each section row, with horizontal and vertical steel bracing.

SIMPLE, EFFICIENT DESIGN—3 automatic locking devices; 8 self-lubricating wheels under each section row. Extra-long wheel carriages. Minimum of moving parts.

Get Safway recommendations!

Submit your seating requirements for recommendations by experienced Safway engineers. There is no charge for this service. And write today for your free copy of the new Catalog 165.

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More school people are learning that you can

ELIMINATE NEEDLESS COSTS and IMPROVE EQUIPMENT QUALITY

In 1958, the farsighted, *value-minded* school boards are walking off with the *real* "bargains" in classroom heating and ventilating comfort. To learn more about how you can get the most advanced controlled ventilation system *within your present budget* read below:

ECONOMY

Compared with the installed cost of some other systems, the Nesbitt Series Hot Water Wind-o-line system saves as much as 20% on construction, equipment and installation costs. Each classroom has its own Nesbitt Syncretizer for heating, ventilating and natural air cooling. And Nesbitt Wind-o-line fin-tube radiation extends along the sill to protect students sitting near windows against cold walls and window downdraft. Each student enjoys the full measure of thermal environment most conducive to optimum learning . . . whether he sits near the window or at the other side of the room.

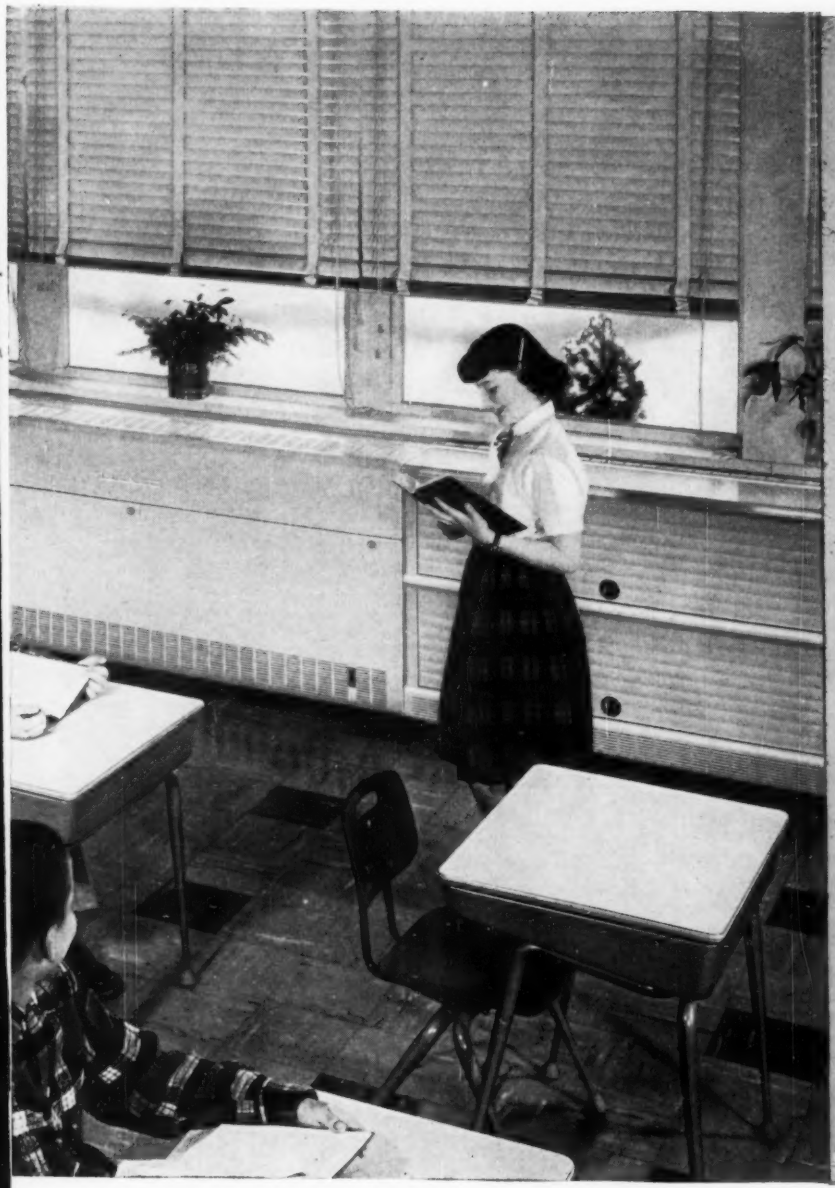
PERFORMANCE

No other unit ventilator provides *controlled* heating, ventilating and natural cooling as effectively as the Nesbitt Syncretizer. Add to this the advantages of Wind-o-line radiation and you have two-way Nesbitt protection against (1) excessive radiant loss of body heat and (2) chilling downdraft.

This unique *double* protection is your assurance of healthful, productive comfort—free of physical distraction—for every child in the room, wherever his seat is located. *Only the comfortable student can maintain maximum learning efficiency.*

QUALITY and VERSATILE DESIGN

The copper tubing of the Nesbitt Wind-o-line radiation does double duty by serving as the supply and return mains for the Nesbitt Syncretizer in each classroom. And that means *double* savings for you on pipes and coverings, and the elimination of expensive pipe trenches, mains and runouts. Because less hot water circulates, smaller and less costly pipes and pumps are needed. Piping within the Syncretizer units is factory-assembled, labor on the job is reduced. Gravity heating maintains overnight temperature, saving money on controls. Sum total of these economies: the best in *controlled* heating and



THESE SCHOOLS CUT COSTS... and *improved* quality

Heating and ventilating costs for 3 more Nesbitt equipped schools

In New York — $1.57 sq. ft.

Myron Avenue Elementary School, Tonawanda, N.Y.
Architect: Fenno, Reynolds & McNeil, Tonawanda, N.Y.
Engineer: Jacobus & Babinski, Buffalo, N.Y.
Gross Area: 15,100 sq. ft.
Total Contract: $256,119.00
Heating & Ventilating: $23,681.00
Nesbitt Series Hot Water Wind-o-line System with Wind-o-line Radiation concealed by storage cabinets as shown at left

In Colorado — $1.48 sq. ft.

Machebeuf High School, Denver, Colorado
Architect: John Connell, Deceased
R. James Noone, Denver, Colorado
Engineer: Marwi S. Wilson, Denver, Colorado
Capacity: 550 pupils
Gross Area: 48,390 sq. ft.
Total Contract: $523,200.00
Heating & Ventilating: $71,833.00
Nesbitt Series Hot Water Wind-o-line Radiation

In Maryland — $1.57 sq. ft.

Stephen Knolls Elementary School, Montgomery Co., Maryland
Architect: Bailey & Patton, Rockville, Maryland
Engineer: Redmile, Corab & Wood, Washington, D.C.
Capacity: 450 pupils
Gross Area: 28,037 sq. ft.
Total Contract: $303,851.00
Heating Contract: $44,025.00
Nesbitt Series Hot Water Wind-o-line System eliminated pipe trenches—put all piping above floor for maintenance accessibility

ventilation for your school at a cost that's way down . . . with quality that's way up for every classroom.

SCHOOLS IN MODERATE CLIMATES

In parts of the country where daytime winter temperatures rarely fall below 20°F., Wind-o-line Radiation may not be necessary because outside window walls do not create special comfort problems. In such areas, Nesbitt offers the Mainline System. It offers the economies of the series piping arrangement without sacrificing quality.

Send for the big book, packed full of information on the value of *controlled* classroom ventilation, ***More Learning per School Dollar.***

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more learning per school dollar

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Sold also by American Blower Corporation and by American Standard Products (Canada) Ltd.

Surveying the School Scene

ROCKET SAFETY RULES FOR SCHOOLS

Students should not experiment with rockets and other missiles unless such activity is as rigidly controlled and expertly supervised as are experiments by rocket scientists and engineers, the Office of Education warned. In the wake of serious accidents resulting from rocket propellant fuel experiments by high school students, the office offered these rocket safety rules as school responsibility:

1. No youth should attempt to build a rocket, mix fuel, load the rocket or attempt to launch it without supervision by an adult rocket expert.
2. Teachers should not supervise experiments with rocket fuels or launchings unless they have had military or industrial experience in rocketry or unless such a person is also present.
3. Authorities should become familiar with local and CAA laws concerning rocket launching and the use of dangerous fuels, chemicals, and combustibles.
4. High school science teachers should be encouraged to keep up-to-date on scientific developments in this new field.
5. Students should be encouraged to learn about the broad field of space exploration instead of rocketry alone.

RECORD POPULATION GROWTH

The U. S. Department of Commerce's annual report on population trends portended a continuing increased strain on local school districts as a total of 4,302,000 babies were born during 1957, the largest number on record. In the past eight years, 1950 to 1958, about 32 million babies have been born, or a number greater than were born during the entire 1940's.

Population growth in the United States also continued at a record level during 1957, amounting to about three million persons. There were an estimated 172,790,000 persons in our population at the beginning of this year, compared with 169,800,000 a year earlier.

NEW PITTSBURGH SCHOOL HEAD

The Pittsburgh, Pa., school board has elected Calvin E. Gross to succeed the retiring Dr. Earl Dimmick as superintendent of the Pittsburgh public school system. Dr. Gross is a graduate of the University of Southern California and holds a doctor's degree in education from Harvard University. Since 1956, he has been supervising principal of the Niskayuna Central School District at Schenectady, N. Y.

REASONS FOR COLLEGE DROPOUTS

About one out of four students who enter college drops out by the end of the first year, a recent U. S. Office of Education study disclosed. Some of these at one time or another re-enter so that about six out of ten who enter college graduate, but more than one fifth of those who drop out of college permanently were in the top 20 per cent of their high school graduating class.

The study revealed that reasons for discontinuing college most often mentioned by men were military service and lack of interest in studies. Women reported marriage and taking a full-time job as chief reasons. Both men and women listed financial difficulties as an important reason.

CRACKDOWN ON NEW WORK

Superintendent William Jansen, of New York City, has reported that a total of 1021 students have been suspended following the board's crackdown on troublesome pupils. A total of 172 boys and girls were suspended in the three-week period ending March 28. As of that date, 463 pupils are still on suspension. Some of the pupils whose cases have been adjusted, are back in school, some have been committed to institutions, and some have left the system. The report listed 29 known narcotic cases, including three girls. Ten pupils were listed as suspects.

EMPLOYMENT IN EDUCATION

The Bureau of Labor Statistics of the U. S. Department of Labor recently reported that, as of January, 1958, there were 2,470,700 people employed in "education," drawing a payroll of $900,500,000. In contrast, a labor force of 2,484,800 were employed during November of 1957 with a payroll of $907,300,000.

HOW TO IMPROVE HIGH SCHOOL EDUCATION

A six-point program to improve high school education was recently outlined by three of the nation's leading scientists and educators. Dr. James R. Killian, Jr., president of the Massachusetts Institute of Technology and President Eisenhower's special assistant for science and technology, Rear Admiral Hyman G. Rickover, chief of the Atomic Energy Commission's naval reactors branch, and Dr. Merle Tuve, director of the department of Terrestrial Magnetism of the Carnegie Institute, proposed:

1. Lift the standards that have to be met by all high school graduates.
2. Push the talented student ahead as fast as he can go.
3. Fight against anti-intellectualism.
4. Give the high school teacher enough free time to become a scholar again.
5. End the "equal pay" tradition so that superior teachers receive substantially larger salaries.
6. Bring into the high school all the teaching talent possible, changing the "Union card" requirements now restricting certification to teachers who complete too many "pedagogical courses."

SPOTLIGHTING SCHOLASTIC ACHIEVEMENT

In New Philadelphia, Ohio, a scholarship strategy board has been set up, consisting of representatives of local civic groups, business women, pastors of churches, the high school, elementary school, and administrative staffs, and the board of education. Awards have been

(Concluded on page 78)

To Meet the Educational Crisis

Chancellor John F. Brosnan, of the New York Board of Regents, at Albany, N. Y., has issued a statement on the educational crisis, which was unanimously approved at a recent meeting of the Regents.

The Regents have set up a set of aims which it believes are essential in connection with the problem of the schools.

1. *Students* must be willing to learn even the hard subjects, to accept discipline, and to embrace study, not only to advance themselves, but as a patriotic duty to insure the perpetuation of the government and the American way of life.
2. *Teachers* must be willing to sacrifice time and talents in recognition of their sacred trust, to be leaders in creating better men and women, and so, a better world.
3. *Citizens* must be willing to assume and bear the heavy financial burdens inherent in carrying out the necessary programs for new schools and for realistic recognition of teachers' services; but even more, to take an active part in the formulation and promulgation of educational policies and practices in their schools.
4. *Educators* must be dedicated to reexamine objectively the content and method of their teaching and broad-gauged enough to reshape the same to meet the needs of the time.

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Because of quality, this operator is guaranteed for the life of the windows!

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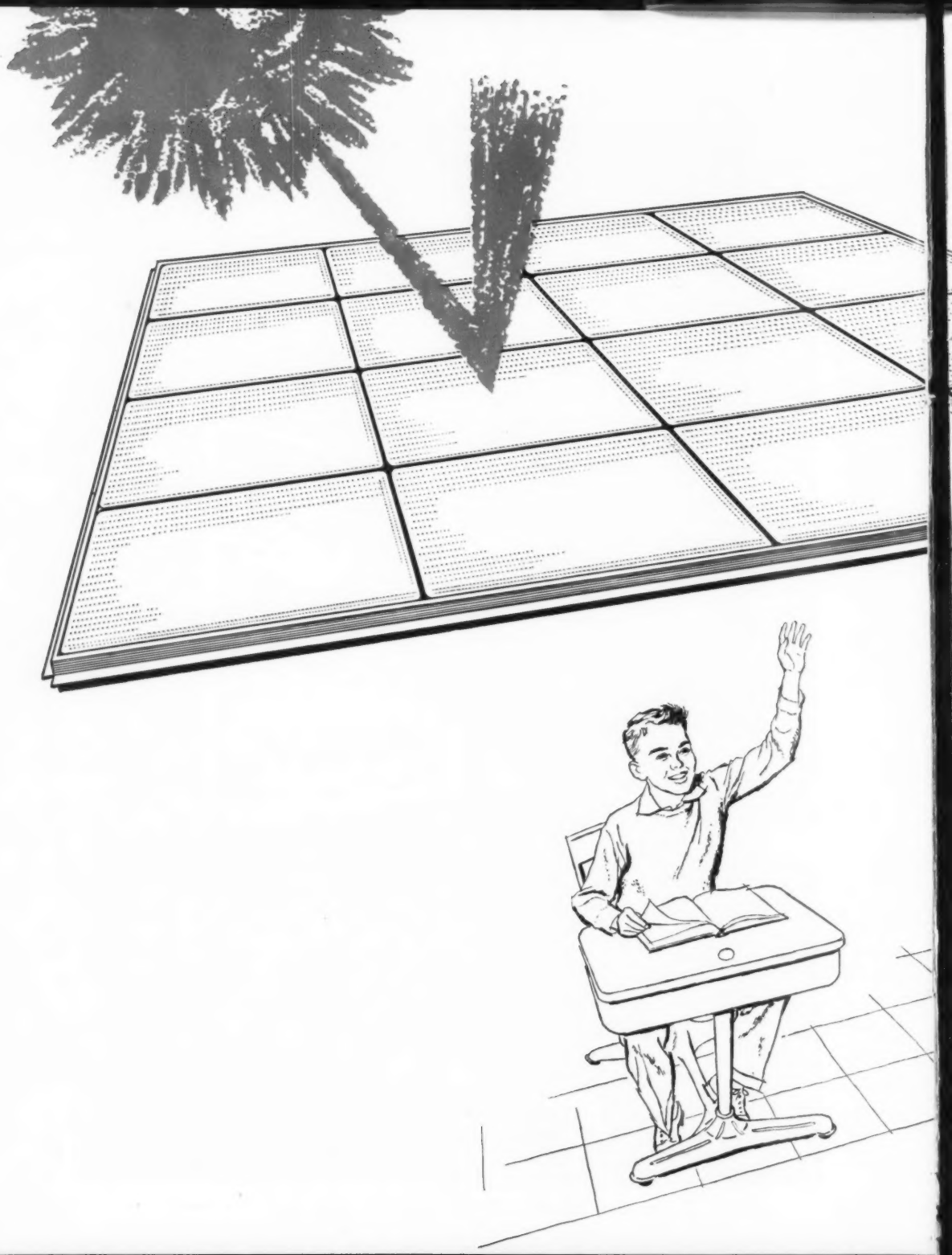
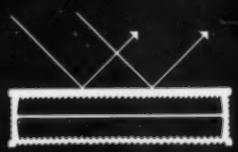
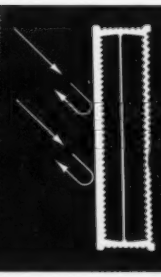




BUILT-IN PRISMS accept cool North light and low-angle winter sun, reflect hot, high-angle spring and summer rays.



O-I 80-F GLASS BLOCK provide the same solar heat-controlling advantages to sidewall daylighting.

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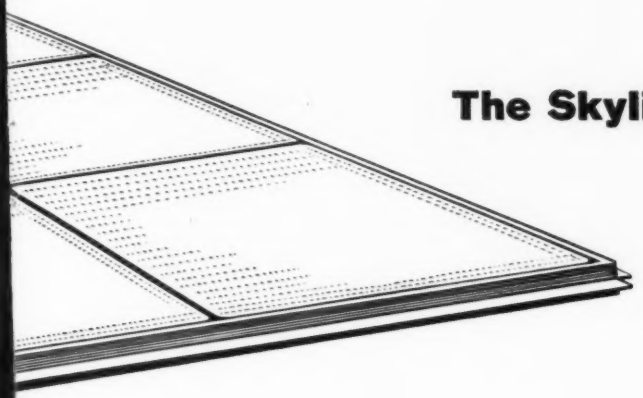

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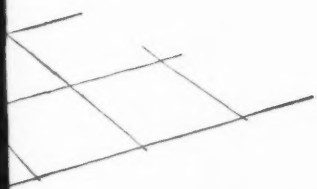

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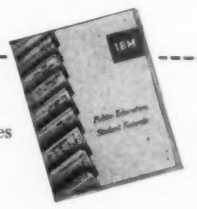

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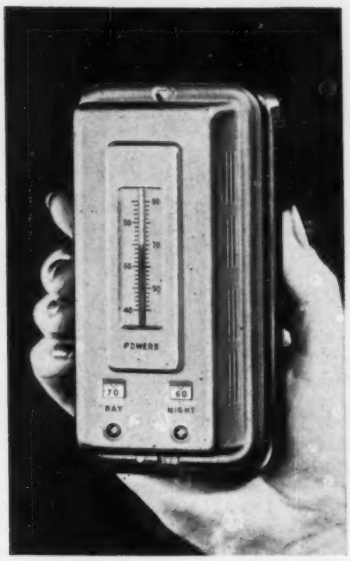

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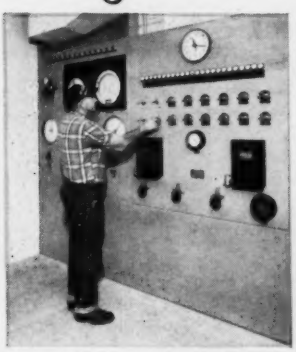

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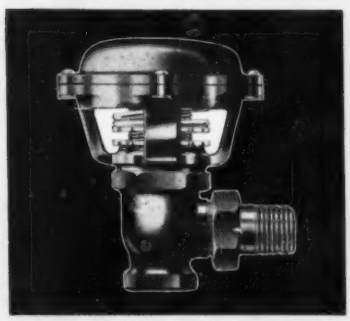

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ASSOCIATION NEWS

The AASA in Cleveland and San Francisco

1. IN CLEVELAND

Mild but genuine concern over the recent severe criticisms of education in the daily press and the popular magazines; recognition of the possible effect on the schools of the current business recession; factual evidence that the secondary schools *are* doing much sound work in the fields of mathematics and science; and some insistence on the fact that gifted children as well as the average youngsters and the backward learners are recognized and well served in the schools — these were high lights of the Cleveland sectional convention of the AASA, March 29 to April 1, 1958. Among the practical problems of school administration which received detailed consideration were: (1) the improvement of state and local school support and tax structures, (2) the use of merit as a means of recognizing outstanding teachers and encouraging generally higher effectiveness among teachers, (3) security and welfare of superintendents through recognition of their professional status in school board policies and in state laws. The attendance was reported as approaching the 8000 mark; it exceeded that of the St. Louis and San Francisco sectional meetings. The commercial exhibits were simply astounding in number, variety, and helpfulness. The extensive architectural exhibit included some fine work in secondary schools. Architects and school boards are no longer groping for novelties in clerestory window arrangements, up-sweeping curved roofs, and barn-like gymnasium-auditorium spaces. Growth in school design is distinctly shown in better classrooms and group-instructional areas, and in the grouping of building units.

Conant on School Statesmanship

Discussing the "superintendent as educational statesman" at the opening session, Dr. James B. Conant contented himself largely to saying that the superintendent cannot simply be a good executive or a clever politician; he must be a courageous statesman who "sets the whole tone of the educational system and determines the attitude of the community toward the schools." Without bowing to sudden gales of public opinion, "he must be responsive to the long-range trends of pubilc demand. He must constantly keep in balance the schools' function in developing the personality of each pupil, the parental aspirations, the community's needs, and the national interest."

Taking up the recent criticism of the schools, Dr. Conant urged that while successful statesmen listen to criticism, they are not intimidated by it. "The question that confronts every educational administrator almost daily is to winnow out of the mass of criticisms what is justified and what is unjustified, and proceed to benefit from the former."

In recent months, Dr. Conant who is engaged in a two-year national study of secondary schools, has visited some 40 high schools in 16 states. In his discussion of citizens' criticisms of secondary schools, he pointed to many fine situations which he has found. Better guidance, more language work, special attention to the highly gifted, continued stiffening of the program of the seventh and eighth grades, are needed improvements in Dr. Conant's opinion.

The General Sessions

Of the general sessions, the address of Chester Bowles, former ambassador to India, was the most significant. In concluding his paper, he said:

As we seek to bring our spiritual, material, and human resources to bear on what constitutes a new era in the affairs of man, we Americans will face formidable difficulties. But so will the Soviet Union and so will China.

We have nothing to fear from an open political, economic, and ideological contest between totalitarian and free societies. Only the faint-hearted and the cynical would sell democracy short. It is only necessary that we clearly see our goal.

Our national purpose is more than a balance of nuclear terror, more than the absence of armed conflict, more even than victory in the cold war. Our national purpose is no less than Abraham Lincoln's "just and lasting peace" in a world in which the democratic spirit is again everywhere confidently on the offensive.

Let us, therefore, act positively out of our faith in the destiny and strength of free men, not negatively out of fear of Communism. Is the Kremlin not goading us to do what must be done anyway?

As at other great moments of their history, the American people are prepared to support the bold and imaginative policies which are now called for. They ask only for the facts, and for a global perspective on those facts that fits their democratic tradition and experience. In other words, they ask only for leadership.

In an address Sunday evening, Governor G. N. Williams of Michigan, urged the strengthening of the American school system and demanded federal support of state and local school systems. At the Sunday morning Vesper Service, Rabbi A. H. Silver, of Cleveland, limited his discourse almost entirely to the improvement of the human intellect and did not speak about the improvement of the human spirit.

School Boards at Convention

While few school board members were in attendance at the convention, the work of school boards was fully recognized in the resolutions. The influence of the National School Boards Association was felt in a number of significant special group sessions, at which school board members and superintendents shared in the discussion of improving local and state structure for school support, addressed by Charles A. Mosher, Oberlin, Ohio; a proposal for the security and welfare of superintendents, discussed by P. L. Ewing, New York University; getting and keeping good school board members, addressed by Mrs. Edith Simmons, Great Neck, N. Y.

Everett N. Luce, Midland, Mich., president of the National School Boards Association, in his speech before the general session on Monday evening, restated the recognition which his Association has always given to the trained administrator as the central force in all school efficiency. School boards look to the superintendent for advice and guidance, for encouragement in bettering programs, for legal advice. There is need just now, he added, for strengthening especially the secondary school program, for toughening and improving the quality of scholarship, and for giving better opportunities to the talented without forgetting the average and the slow students. In concluding, he urged better organization of school districts and sound financial support, particularly on the state and local levels.

Resolutions Commend School Boards

In a series of ten resolutions, the Association (1) recommended the integration of all groups in the solution of public school problems and in working together in the interests of unity for the common good; (2) urged prompt action in the adoption of a broad, comprehensive national policy of school support of the total program of elementary and secondary education; (3) accepted the challenge of greater instructional needs in science and mathematics; (4) commended the school boards for their tremendous contribution to the schools; (5) commended the close co-operation of the National School Boards Association with the AASA; (6) deplored the tactics of opponents to further needed schoolhouse construction and applauded school boards for providing needed classroom space; (7) rejected the four-quarter school-year proposal in favor of an extended school year; (8) urged higher teachers' salaries; (9) cautioned against adamantly opposing merit salary schedules, and urged experimentation in teacher evaluation; (10) commended efforts toward greater professionalization of the superintendency.

2. IN SAN FRANCISCO

In San Francisco, meanwhile, almost 5000 school administrators, teachers, guests, and exhibitors from the Western states, Alaska, and Hawaii encountered a similar general program schedule of main sessions, discussion groups, exhibits, etc. The March 8–11 conclave headquartered at the Civic Auditorium.

The keynoters included:

1. Senator Frank Church (Dem., Idaho) warned that public education in America is not fully meeting the nation's needs. Con-

(Concluded on page 19)

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ASSOCIATION NEWS

(Concluded from page 16)

sidering "Public Education at the Crossroads," Church stated that if there is any truth to critics' charges that scholastic standards in American high schools are geared for the lower student, or that the typical graduate has had only a sketch exposure to such demanding courses as chemistry, physics, and math, then, "it is time for us to reappraise some of the tenets basic to American education today."

He asked two questions — Do the schools stimulate the young people to the utmost? and Do they require of them their full potential? "If not," Church answered, "we are wasting time and talent, both of which may be vital to our survival as a free country."

2. Representative Frances P. Bolton of Ohio also warned AASA delegates, her warning centering around "a danger into which the teaching profession is falling in an effort to bring the standard of teaching onto a high plane. Graduate training for teachers is placing all too much emphasis on method rather than upon context. There is far too much demand for degrees than for a true knowledge of subjects taught or of the most important of all: understanding of youth."

3. Arthur F. Corey, executive secretary, California Teachers Association, related the fact that American public schools do not even approach the achievements which the founding fathers assigned them because the schools lack money — "the most fundamental shortage in public education. . . . Education, like national defense, is going to cost more if it is to be good enough to meet our needs."

Awards for "distinguished service in school administration" went to Samuel E. Fleming, former Seattle, Wash., superintendent, and Clyde U. Phillips, former superintendent of schools, Hays, Ark.

A-V EXPERTS MEET

How to use the newest teaching tools to "step up educational efficiency" was the major topic at the annual convention of the Department of Audio-Visual Instruction (NEA), held April 21–25 at the Leamington Hotel in Minneapolis, Minn.

Some 1000 audio-visual specialists heard keynoters Minnesota's U. S. Senator Hubert H. Humphrey, Walter S. Crewson, associate commissioner of the New York State Department of Education, and Horace S. Schwerin, president of the Schwerin Research Corp.

Special attention was devoted during most of the meetings to educational television, its progress and problems.

SEASBO CONVENES IN FLORIDA

The seventh annual conference of the Southeastern Association of School Business Officials, held April 9 to 12 at the McAllister Hotel in Miami, Fla., provided several outstanding addresses, rounds of discussion groups on many phases of school official topics, and a special session asking "Is Educational Television Proving to Be Practical?"

Main speakers included: Dr. Joe Hall, Dade County, Fla., superintendent, and Dr. R. L. Johns, head of administration and field services, University of Florida. Presiding was Roy C. Taylor, Greenville, S. Car., schools, 1957–58 SEASBO president.

COMING CONVENTIONS

May 8. Connecticut Association of School Administrators, at Cheshire, Connecticut, Waverly Inn. Secretary: Dr. Harold Mahoney, State Education Department, Hartford, Connecticut. Attendance: 160.

May 22–24. Massachusetts Association of School Committees, Inc., at Lenox, Mass., Curtis Hotel. Secretary: James W. Whitehead, 19 Richfield St., New Bedford, Mass. Attendance: 500. Exhibits.

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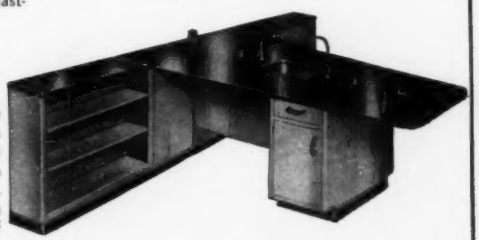
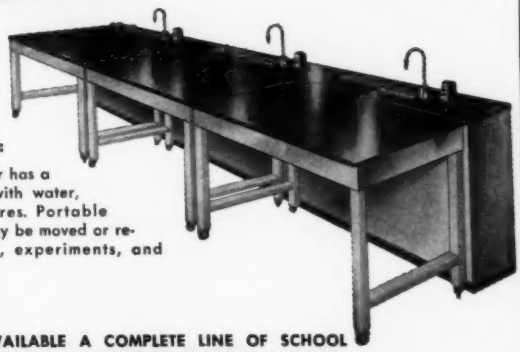


◁ 5000 Series
Student Science Desks:

These units are ideal for a 4-Student-4-Class arrangement. Each student has easy access to all service fixtures, and is provided an individual drawer. The unobstructed working surface and handy notebook compartment allow for better experimental student work.



8000 Series ▷
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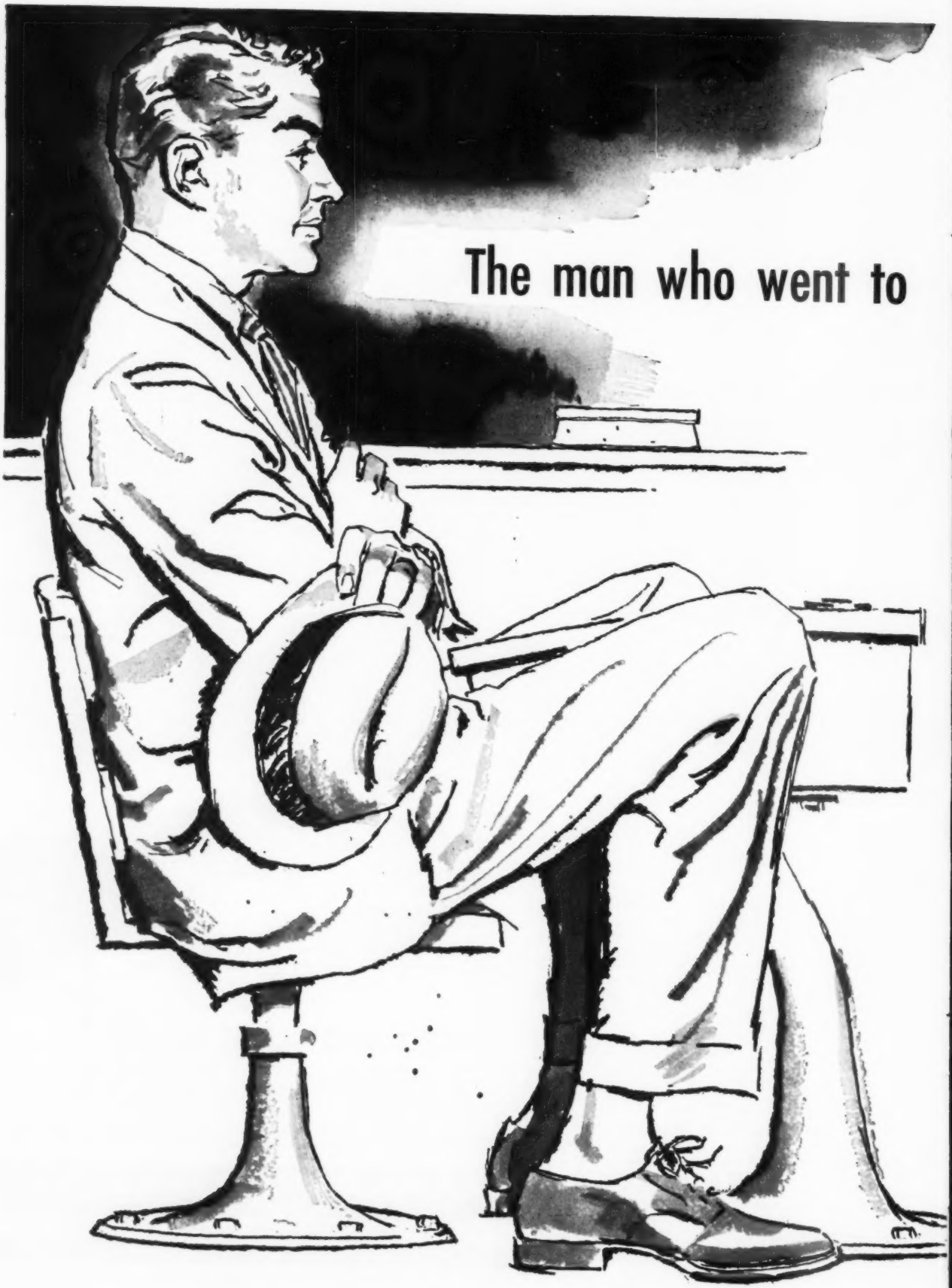
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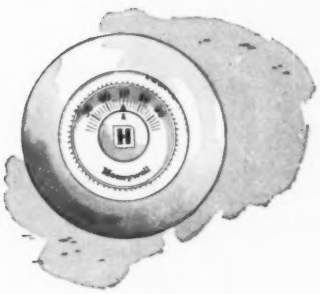
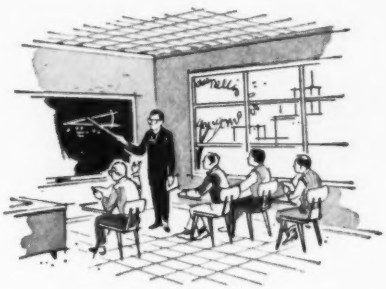
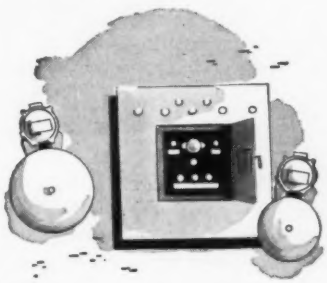


For better learning—the Honeywell Round Thermostat in every classroom—Effective teaching calls for proper matching of temperature with specific classroom activity. An individual pneumatic Honeywell Round in each classroom permits the teacher to adjust the temperature as needed.



For greater economy—New Honeywell Light-Saver* Control—Dims artificial lights when natural light is strong, brings them up as natural light wanes—automatically. Optimum classroom lighting is maintained; savings in electricity for lighting of up to 80% are possible.



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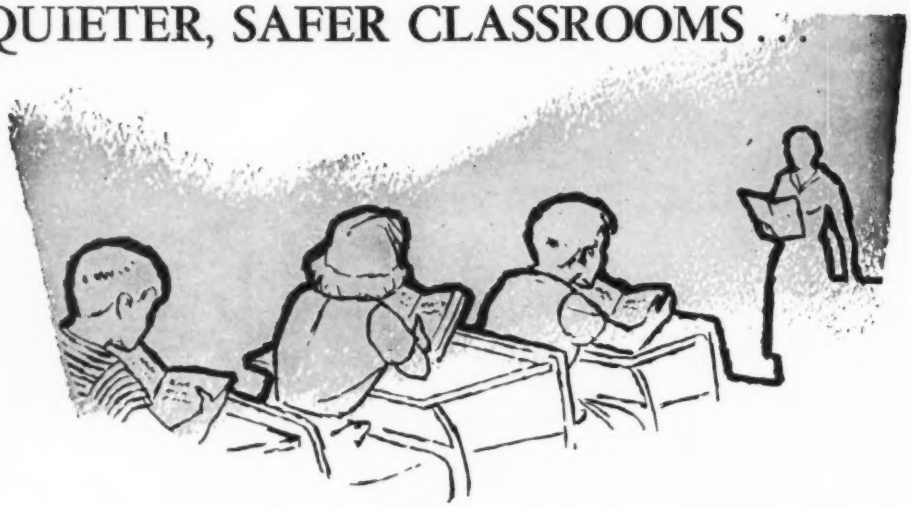

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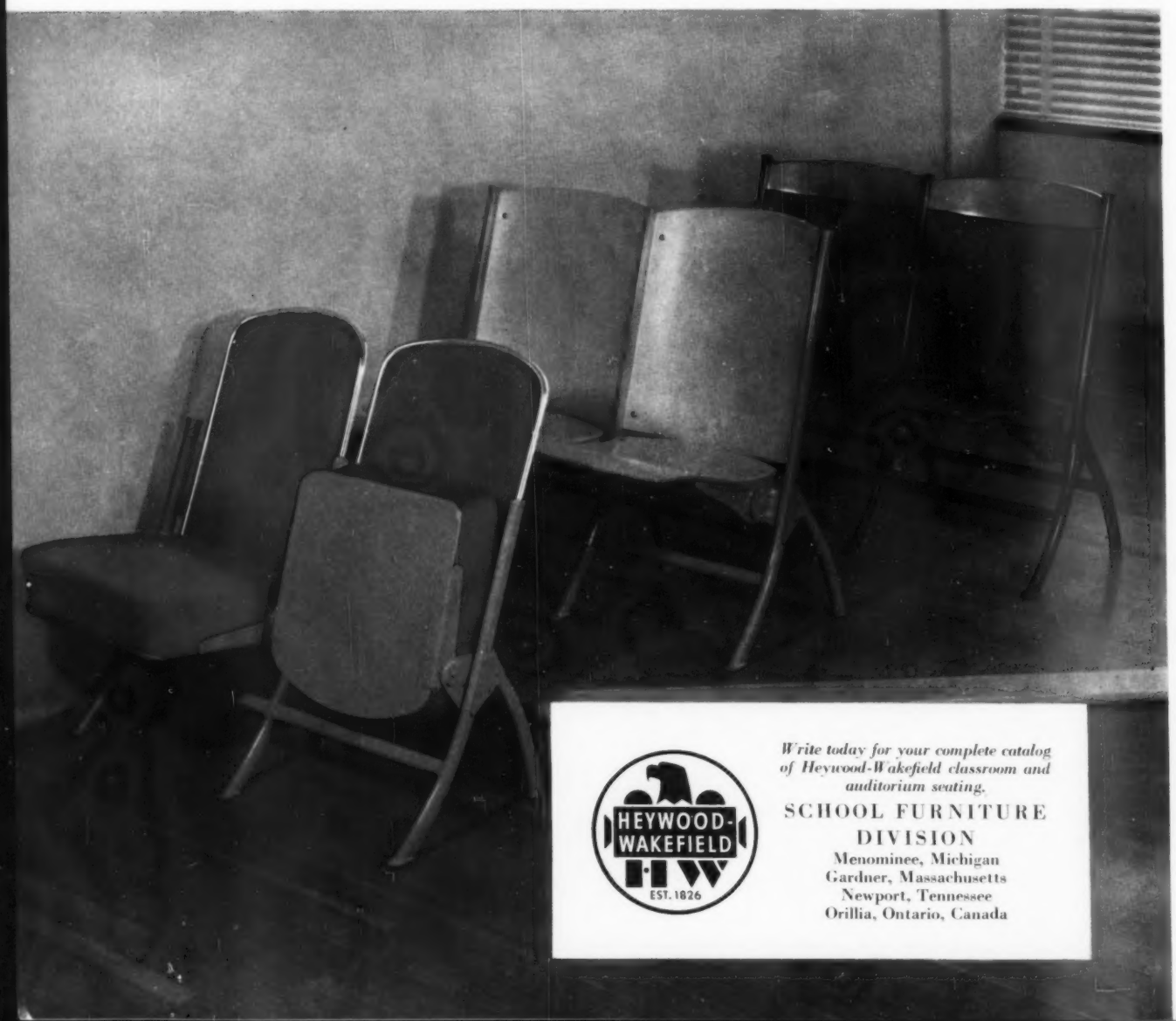

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THE AMERICAN
School Board Journal
A Periodical of School Administration
MAY - - - - - - - - - - 1958

In this advanced mathematics seminar—

Young America Meets the Challenge

NATT B. BURBANK
Superintendent, Boulder, Colo., Schools

The tall 17-year-old boy stood by the blackboard holding what looked like an emotionally disturbed bird cage. "This complicated contraption," said he to his listening classmates, "is a physical model of the mathematics in four-dimensional theory."

Bob Davies was one of 15 students of the Boulder, Colo., high school enrolled in an advanced math seminar. All eager to learn more about higher mathematics, they had volunteered to join this class in addition to a full load of other subjects. By their own choice they were meeting in the evening in order to be free of other activities. They wanted to apply their undivided attention to the fascinating study of higher math.

In a student body of 1200 these boys and girls would have passed almost unnoticed. None of them wore thick glasses. There wasn't an odd-wad in the lot. They looked just like your kids and mine, and the neighbors' kids up and down the street.

Dave Wining, short and solidly built, played middle guard on the football team. The father of Phyllis Jones is a college professor. Real estate sales is the business of Gary Forsberg's dad.

One common bond they had, and that was a love of mathematics. They were eager to find out about such tough sounding subjects as postulational algebra systems, non-Euclidean geometries, transcendental and denumerable numbers, permutations, and geodesics. They were ready and willing to put in extra hours over and above their other homework, for the privilege of speeding up their mathematical education.

Their teacher, Glenn Gilbert, who had sparked the idea of this seminar, bore the earmarks of a gifted leader. He knew how to stimulate driving interest in his students. They wanted to learn, not because of school requirements but by reason of their own thirst for knowledge.

When the ten-minute break came, not all the members of the group left the room. A cluster gathered at the blackboard, and soon an animated discussion was in progress. Snatches overheard revealed that the extent of the universe was the topic. Big John Cys, dedicated to getting a PH.D. in astrophysics, was vigorously expounding the theories of Einstein to prove his point. Strong opinion flowed freely as to whether the universe is finite or infinite. Gilbert joined in the discussion, not as a taskmaster but as a helper and stimulator of ideas.

Soon the class returned to more formal work. Bob Davies took his place at the blackboard, with his wire nightmare resting on the teacher's desk. He proceeded to explain how the model represented the point, the line, the cube, and so on to the fourth dimension. All but a dyed-in-the-wool math lover would have been left far behind. Yet his fellow students followed him with rapt attention, now and then challenging him to prove his statements.

This was Bob's individual project, the topic which he had selected as his contribution to the group's study. Each girl and boy was expected to choose a particular problem for thorough investigation and report to the class. For this was a giving as well as a receiving experience. Each one learned, and each one helped the others to learn.

Here was learning for learning's sake, not by government edict. Here was independent thinking and study. Here was youth bringing its mental abilities nearer to full flower.

And here was one of the answers to the challenge of the sputniks. Let potential leaders of mathematics and science have a chance to keen the edges of their minds on the whetstone of higher study. Their capabilities are great. Let their opportunities for advanced work be as broad.

Thus we will upgrade the human resources of America, and thereby improve our chances of survival.

A review of two industry-sponsored boosts to science teaching in high school: helps that are indicative of how—

Industry Stimulates Interest in Science

JAMES R. IRVING
Director of Public Information
Scientific Apparatus Makers Association, Chicago, Ill.

The price of error has become too expensive for human survival in the present world of restrained outlawry. That is why both science and industry are working overtime to secure national advancement and impregnability.

A huge problem is where are we going to get the bulwark of scientists demanded by this tremendous job? It has been estimated by experts that the shortage of scientists and engineers will skyrocket to 457,000 by 1965. This intelligence attains the weight of reality when we realize the severely crippling effect of the present shortage, which is minor by contrast.

It is becoming increasingly clear that the vast resources of every community must be tapped in an effort to establish an ordered and coherent policy dedicated to the stimulation of scientific interest at the high school level.

Sporadic attempts have been made, with varying degrees of success, to determine what must and what can be done on this score. But so far no concentrated national inquiry, dictated by a disciplined and orderly intelligence, has been accomplished.

1. ONE COMPANY'S APPROACH

As an outstanding example of what one company — Minneapolis-Honeywell Regulator Company — recently did, let's review their highly successful High School Science and Math Teacher Workshop held in Minneapolis, August 26–30 last year.

Lachlan Reed, Honeywell's Director of Industrial Education Relations, headed up the program which resulted in comments from the teachers like this: "Best in-service training in my experience. . . . Truly an inspiration. . . . Hard to think of a better program. . . . One of the finest educational experiences I've ever had — like having exceptionally excellent private tutors."

Reed points out that the M-H program was built on his company's sincere desire to fulfill some real educational objectives in the Minnesota city — not unlike, however, very similar needs to be found throughout the country's width and breadth. "We were out to provide an *effective*, *inexpensive*, and *useful* assist to teachers of science and math to be better teachers."

"We built our program on the sound concept that these people especially should have a good understanding of scientific and mathematical principles as used in industry. Where possible, we tried to provide them with information and scrap equipment that they could use in their classes as demonstration material to interest students.

"Perhaps, best of all," according to Reed, "the teachers had an opportunity to 'live with' engineers and scientists at work and get firsthand experience in understanding their activities."

In short, the motivating theme of the Minneapolis-Honeywell teacher training project was built around the idea that Honeywell "opens the door," but teachers on their own must get involved to derive value from the experience.

A Typical Day

One day, for instance, was spent on Temperature Controls. Seminar discussions on research, design, development, production, and marketing gave way to individual presentations of how science and mathematics applied to the M-H product line. Teachers bought their own lunch in the company cafeteria and heard a luncheon talk, "What is Honeywell; its products, people, programs?" The afternoon was devoted to touring the areas discussed in the morning's lecture-discussions.

The following four days followed the pattern of the first, with teachers getting firsthand impressions of the company's Aero products and Research Center. Interesting authoritative luncheon talks like, "Honeywell and People: Intelligent Use of People"; "Business Aspect of Developing, Producing and Marketing Controls"; and "Varieties of Engineering and Science at Honeywell" all helped the teachers get a significant overview of the company.

Throughout the M-H science and math teacher workshop, plenty of time was left for individual teacher subject-matter interests, too. For example, chemistry teachers could spend their time in the chemistry laboratory or in the metal finishing department. Mathematics teachers could be found studying company methods and procedures in design, tabulating, and accounting. Physics instructors devoted their special interest periods to test engineering, design, drafting, etc.

Two Minneapolis, Minn., junior high school general science teachers donned protective glasses as they took a close-up view of silicon crystal growing at Minneapolis-Honeywell's Research Center. Donald H. Rosholt (right) of Phillips junior high school and Fred M. Mohr of Northeast junior high listen as Thomas Davies, a research assistant, explains how silicon is used in basic research projects carried on by the company.

Was the program worthwhile? Honeywell's Director of Industrial Education Relations, Lachlan Reed, smiles with a deep sense of satisfaction when he tells you, "all participants marked 'Yes' on unsigned questionnaires asking 'Is the basic idea valid?' and 'Should a comparable workshop be repeated?' "

2. THE APPROACH AT PITTSBURGH

During last year's Chemical Progress Week, Pittsburgh set out to establish a pattern which other communities could also follow. Since there are a number of factors in need of correction which are beyond the scope of any one community, Pittsburgh let its emphasis fall heavily on vocational guidance as the quickest means of getting aid.

Before going into the details, here are some observations made by James A. Fisher, vice-president, Fisher Scientific Co., who spearheaded the approach.

"It should be made clear at the outset," he said, "that the problem is not only one of getting more scientists, but of getting good ones. Quality should not, under any circumstances, be sacrificed for quantity."

He said there was no trouble in lining up the business element of the city. "They were definitely co-operative." The cost of the program was insignificant: $648.10 divided among 10 local members of the Manufacturing Chemists Association. Time given was much more costly than cash expended. He said that some of the firms had as many as seven representatives at the dinner which was comprised of representatives of business, the community, education, and particularly vocational guidance counselors of the area.

"There were no real stumbling blocks."

This was true, he made it clear, because the group could take advantage of the cumulative experience of other years' efforts. "We were on third base when we started, since we had learned a great deal from the past."

He said it was harder to interest the community, "but not too difficult.

"We gunned our efforts toward the vocational guidance people. We wanted to make sure that they were aware not only of the financial advantages of scientific training but also of the valid and rewarding contribution science makes to the country's security, comfort, and well-being."

Guidance Personnel Used

Since their best bet was through the vocational guidance people, an approach initially suggested by the Scientific Apparatus Makers Association, Mr. Fisher called attention to the weakness of this high school service as presently constituted:

1. Based on a detailed analysis of the teaching backgrounds of 5300 of the nation's high school guidance counselors from 12 states reporting factual data, *only 9 percent have a college or training background in science.*

2. Ratios of counselors to 1000 students on the high school level vary widely from 3.4 counselors/1000 students in Wisconsin and California to .2/1000 in Tennessee.

It would seem logical to assume, therefore, that if a larger proportion of science-trained vocational guidance counselors were available, much of this intense and subtle problem might be resolved. But since no noneducational group can, or should, dictate curricula for future teachers, the best immediate plan, according to Mr. Fisher, is to impress upon these counselors and classroom science teachers the availability of interested and understanding technical experts in the field to help them guide youth in scientific study. "Basically, of course, what we have to do is to nurture this desire in the student himself," he said.

He believes that a basic consideration in the matter of interesting high school students in the science is the manner in which arithmetic is taught and accepted in the elementary schools.

"Unless the child can accept arithmetic as an automatic tool, and not as something to be avoided, he is not going to be interested in any endeavor that demands mathematics, the common language of all sciences. If we can find a way to make grade school arithmetic more interesting plus that added something that will maintain interest and stimulate imagination, we have had a good start," he observed.

A Community Plan

Using the Pittsburgh experience and plan as a nucleus, plus ideas contributed by other towns, here is a suggested community-wide approach:

1. Form a small planning committee of business interests headed by an officer — at least a vice-president — of a firm engaged primarily in scientific work.

2. Have that chairman, or other members of the committee, seek additional membership through representatives of the

community, school board members and school administrators, vocational guidance counselors, the mayor or influential aldermen, chairmen of local science associations, and heads of science departments of nearby colleges or universities.

3. Hire a public relations man, or borrow one from one of the companies involved, whose work should begin at least a week, preferably two weeks, before the drive gets under way. If this first story is adequately done, it may attract members of the community who can make a genuine contribution but who are not on that list of community leaders which all cities seem to have and from which all such selections are made.

4. Compile a list of all high schools within the metropolitan area where vocational guidance counselors are employed, together with their names.

5. Outline the problem carefully and have each member of the full planning committee commit to writing, or give orally at a luncheon or other meeting, his or her solution of the problem.

6. From this information prepare a statement for the press and other communication media. (Pittsburgh's plans called for "Miss Atom Model," clad in scale atomic models, to help the mayor sign a proclamation week.)

7. Invite top-grade high school science students, their parents and teachers, all vocational guidance counselors and the full committee to a tour of some scientific project. Pittsburgh was doubly fortunate in having the Mellon Institute nearby, because of the national fame of this endeavor which employs over 600 scientists and technicians and because it is extremely difficult to get into Mellon. The combination of proximity and inaccessibility proved attractive. However, with proper stimulation, a tour through any scientific enterprise will fiill the bill.

8. Have the order come down from top industrial officials to have a number of their men of adequate position and influence attend the tour.

9. Line up volunteers to act as greeters at the sight of the tour, brief them carefully on the object of the trip, and instruct them to pay particular attention to the vocational guidance people.

10. Make sure as many people as possible are introduced to each other and don't forget the vocational guidance counselors and don't forget their names.

11. Arrange for a dinner, or luncheon, at a good hotel, stressing the need for full attendance by the committee, other representatives of industry, the city hall, the community, and every vocational guidance counselor in the area.

12. Check with the public relations adviser as to whether, in that particular area, a dinner or a luncheon would be more effective. The dinner looms as the better bet from the point of view of time, but there is a better chance usually of getting television coverage of the major speech at noontime. (The Pittsburgh dinner, with chicken, cost $4 per head, plus bar wares.)

13. Have the greeting committee at the door of the dining room to welcome the guests and by this time it should know most of the names, particularly those of the vocational guidance advisers.

14. See to it that a communicative, persuasive, and well-informed person sits next to each vocational guidance counselor.

15. Pick up a master of ceremonies if the affair looks like it needs one. If the planning has been thorough, an M.C. is unnecessary.

16. Select a good news name to make the major speech at the meal and have him work carefully with the public relations man to make sure that he: (*a*) is aware of the network of restraints and disciplines under which the educators must work; (*b*) outlines dramatically the need for new scientists on the basis both of national security and national comfort; (*c*) stresses the need for parents to encourage this pursuit in their children; (*d*) praises the work now being done by the vocational guidance group; (*e*) indicates the need for more of them with a scientific background; (*f*) tells the vocational guidance people that he knows they will cooperate once the picture is adequately presented to them; (*g*) points out the financial benefit accruing to those with mathematics, chemistry, and physics backgrounds, but lets emphasis fall heavily on the genuine contribution such study will make in gaining for the student a place by the national fireside.

17. The committee, as a going concern, should actively co-operate with Annual Science Fairs which in Pittsburgh attracts 20,000 high school students and 65,000 parents. Students and parents from nearby towns are brought to the city in chartered buses.

18. Scientific firms should be encouraged to make displays at the dinner or luncheon, making it clear to the hotel that the materials will be picked up that afternoon, in case of lunch, and the next morning, in case of dinner.

19. Within a few days the chairman should write a thank you letter to each of the guests, enclosing a copy of the major speech — which tells the whole story — asking them to discuss the problem with their church, club, and other groups. For the semblance of continuity, invite them back for next year's drive.

A chemist-guide points out the 14 elements for which a modern chemical reagent is analyzed to public school and parochial science teachers and guidance counselors visiting the Pittsburgh Plant of Fisher Scientific Company, one of 11 co-operating Pittsburgh firms hosting interested school people during the city's "Chemical Progress Week."

Core of the Approach

To recapitulate, here is the core summit of the approach:

1. Utilize what vocational guidance personnel we now have;

2. Encourage more high schools to employ such assistants, particularly those with a background in science;

3. Impress upon parents the financial and patriotic reward accruing to those in this field.

These three steps should be regarded as effective — but temporary — aids, because the problem is not going to be genuinely and permanently solved until the child himself wants to — and is prepared to — take up the tools of science and work with them.

To sum it all up — either a specialized company approach like Minneapolis-Honeywell's, mentioned earlier, or the Pittsburgh community-wide program fostered by a nationwide activity such as Chemical Progress Week, have a profound effect upon solving one of the country's number one school and community problems. Teachers, scientists, and engineers are not produced overnight. Increased emphasis upon their fields and their necessity as a part of the national economy and defense cannot be relegated to weeks, months, or years. The fact remains that the interesting of more students in science and engineering and our interest in better science and math teaching, better guidance, etc., should be a *continuing* grass roots program.

"The greatest single obstacle (to educational improvement in the United States) lies in the fact that the control and financing of schools is in the hands of thousands of local school boards."
— *Rear Adm. H. G. Rickover*

To meet America's present crises, must our schools be reorganized for federal direction —

Should Local Control Be Surrendered?

PETER PROUSE

Assistant to the Executive Director, National School Boards Association

With the barrage of criticism being fired at the public schools — and some of the shots seem well placed — it was probably to be expected that the argumentative artillery would turn its guns upon local educational control. In any event, it is now clear that the objective of some of the bombardment is the end of community decision in American public education, the end of the school board system itself.

The central line of argument being used to foster this objective has the propagandizing advantages of simplicity, superficial logic, and emotional appeal. To combat the grim challenge inherent in Soviet technological and scientific development, it begins, American public education must be drastically strengthened, but this can only be accomplished by making it responsive and subservient to policies, standards, and requirements which will meet the demands of the national interest. It argues that because the power of decision over public education in America is so widely dispersed among the people, the nation cannot forge the schools into a weapon of international competition for use against a threatening political system which can. For this reason, the argument concludes, some form of centralized control is needed; survival itself demands that the American people get rid of their outmoded and sentimental notion that public educational policy should be determined at the state and local level under decentralized citizen and community control.

Those who employ this line of argument concentrate so heavily upon attacking the supposed evils of *system* that they obscure the central source and meaning of their complaint. What they are really objecting to is that the public schools are not being operated in accordance with their own ideas and views as to what constitutes good public education, and which they apparently assume are not likely to prevail without some form of national direction. The more vocal advocates of centralized control seem to favor strongly traditionalist educational views; but, whatever those views are, the question of whether they would or would not provide the bases for better public school education is irrelevant to the fundamental issue, which concerns who shall have the right to make such judgments in the first place.

It will be protested, of course, that the central issue cannot be one of democratic rights in the face of national peril — but if we must ape alien systems in order to compete with them, then let us settle for saving our skins and let freedom go hang. The assumption by many of the critics of American public education that the citizens of the nation will not meet the Soviet challenge by strengthening their own schools unless they are forced, either directly or indirectly, to conform to national policies and standards, is a denial of the very things for which we are told improved schools will help us to fight. If we do not believe that the people are capable of judging the issues of public education, then we must assume that they are incapable of judging other major issues of social and political policy. In that event, democracy itself must be adjudged a failure, and what are we fighting for?

But the argument for national jurisdiction over public education bids for control with a coin of panic minted in the international tensions and insecurities of our times. It asks the people to relinquish freedom in order to save democracy, which seems as foolish an exchange as committing suicide to prevent bad health. Those who support the inauguration of some system of national educational control in America, however, see no perils to freedom, either present or future, in their proposals. It is only fair to assume that they would not make them if they did.

In commenting on the traditional American distrust of federal educational control, an associate professor of education at an eastern liberal arts university recently wrote: "So long as the people have ultimate control over their governmental agencies, there is nothing to fear." The time-honored system of government by representation, he argues, is as democratically valid for determining public educational policy at the national level as it has been in the past for determining such policy at the local level. The government acts through appointed and elected representatives to regulate other major areas of national concern, he argues, so why not public education? Can't those who would be charged with directing public education at the national level be trusted to serve democracy as well as those so charged under the present system?

Aside from the fact that democracy is never extended by reducing the number of those who may influence and participate in its decisions, the stern contradiction to this line of reasoning lies in the unique character of public education, which sets it apart from all other major instruments of social and political organization through which people are governed or govern themselves.

The uniqueness of public education consists of its preoccupation with instructing the young and immature in society, and hence of its special powers to alter the very fabric and pattern of social and political life. Because of this uniqueness, public education has always borne a particular vulnerability to political manipulation of sufficient fundamental consequence as to claim influence over the control of society itself. For let there be no misunderstanding of the fact that public education is primarily a political force. Since it is the wellspring of fundamental values and beliefs, it is the fountainhead of political control. It can perpetuate the traditions, classes, and institutions of the past, or it can tear them down. It can establish the habits of slavery even more quickly than it can nurture the responses of freedom.

Control Society by Controlling Education

Throughout history, men who would control society have recognized that they must first control the education of the young. It was Mussolini who said: "The youth of Italy shall be trained so that in this country there shall be a place for every person and every person shall be in that place. I am here today and gone tomorrow; but let no one think that fascism goes with me."

It seems a superb irony that those who would open the door in America to national control of public education use these same arguments to support their position. They argue that because public education has such profound power and strengths they should be marshaled and mobilized at the national level for maximum use by American democracy against the threats of the Soviet system. This is a dangerous, short-range view. It ignores the sound and protective American democratic principle which holds that because educational and political control are so strongly interassociated, jurisdiction over public education should never become the special province and power of any centralized governmental minority, however exalted, knowledgeable, or representative its members may be. What good does it do to try to save democracy, if in the process one loses it?

Deciding what the public schools should teach, and to whom, and even how, depends fundamentally upon first determining what the goals and purposes of public education should be. In any society, educational goals and purposes inevitably grow out of the beliefs and convictions of a fundamental political philosophy which describes what the individual's role in relation to society, and society's role in relation to the individual, should be. These decisions are all matters which fundamentally depend upon the making of personal value judgments, whose validity, in American democracy, can only be measured by the tests of consensus or constitutionality. For these reasons, the right to retain as direct control as possible over the policies and practices of public education belongs to *all* of the people as surely as any other fundamental democratic right upon which the American nation and society has been founded. Democracy functions through the beliefs, judgments, will, and wishes of the people, and therefore, to the extent that control over public education is removed from the command of the people, to that extent is democracy subverted, and its fundamental purposes circumvented.

To remain the instrument of democratic liberty, American public education has been organized throughout its history upon a system of decentralized control, in which local citizens act to express the will of the people of their communities in public educational matters. That the school board system is based upon democratic representation does not strengthen the argument for some form of national control based upon the same principle, because of all the major areas of governmental function affecting all of the people of the nation, it is in American public education that the desires of the citizens and the governing acts of organized social control remain in the *closest direct association*.

Decentralized direction of the public schools is one of the last great bulwarks of citizen prerogative and democratic freedom. That there are almost a quarter of a million school board members serving today in nearly fifty thousand school districts of the nation, and uncounted millions of ordinary citizens engaged in lay activities affecting the policies and processes of public education, is a testimonial to the functioning strength and vitality of American democracy, not to its weakness. There is nothing wrong with democracy that democracy cannot cure. The future of public education in America must be forged and tempered in the public forum, not handed already molded and cast to a people who have surrendered to a few their control over the very foundry of freedom.

It is remarkable that there is such a growing force of salesmen ready to hawk the wares of centralized control, and abandon some of the fundamental democratic faiths of our past. Close attention to today's published and broadcast mass informational media, however, reveals a growing incidence of everything from outright expression of such convictions to statements which support them through implication.

School Boards: "The Greatest Obstacle"

Among the most prominent advocates of centralized direction of the policies and procedures of public education is Rear Admiral Hyman G. Rickover — a veritable fountain of information and a man with an astonishing claim to the attention of the press and television out of all proportion to his claim to educational authority. Calling for the end of local control last December 6, he declared that "the greatest single obstacle" to educational improvement in the United States "lies in the fact that the control and financing of schools is in the hands of thousands of local school boards," according to a report published in the *New York World-Telegram and Sun*. After stating that "our Nineteenth Century educational philosophy is as hopelessly outdated as the horse and buggy," the Admiral offered the opinion that "Nothing short of a complete reorganization of American education, preceded by a revolutionary reversal of educational aims, can equip us for winning the educational race with the Russians." Expressing apparent impatience with deliberative democratic processes, the Admiral stated that because "it is extremely difficult and time-consuming to convince thousands of school boards that they must change the curriculum of the local high school," we should establish immediately "some sort of national standard to which diploma and degree-giving institutions must conform." Notice the imperative nature of the Admiral's double use of the word "must."

Admiral Rickover takes notice of the "widespread distrust of the federal government in matters educational," and so he advocates that a private "Council of Scholars" be established "by our colleges and universities as a joint undertaking; or perhaps by foundations," which would "set a national standard for the high school diploma, as well as for the scholastic competence of teachers." And then the Admiral bares the teeth of the plan:

> High schools accepting this standard would receive official accreditation, somewhat on the order of the accreditation given medical schools and hospitals. Teachers would receive a special certificate if they completed the requisite course of studies. Community pride would be a potent factor in inducing high schools to obtain accreditation. . . . Taxpayers will begin to wonder whether they are getting their money's worth when they see other schools receiving accreditation, and when their children find admission to college difficult because theirs is an inferior diploma.

So there you have it: national direction of public educa-

(Concluded on page 74)

Growing Complications | In Teacher Supply and Demand

▸ The outlook for September: 71,887 graduates with preparation for high school and 44,102 elementary school graduates . . . an increase between 1958 and 1957 of two per cent for grade school teachers and an increase of ten per cent for high school teachers.

▸ In 1957, 73 per cent of all graduates entered teaching. If this ratio holds true in 1958, some 85,000 new teachers of the 115,989, 1958 graduates will be available.

▸ Most encouraging: the per cent of increase in newly prepared science and mathematics teachers is greater than the per cent of increase of new teachers in other fields.

▸ Most discouraging: the growing, unfavorable balance of more graduating high school teachers than graduating teachers prepared for the elementary schools.

RAY C. MAUL
Assistant Director, Research Division, NEA

Both good and bad news can be found in the Eleventh Annual National Teacher Supply and Demand Report just released by the Research Division of the National Education Association.[1]

It is most encouraging to note that the *per cent of increase* in newly prepared science teachers is greater than the per cent of increase in the number of prospective candidates in any other field. Members of the class of 1958 who have prepared themselves to teach science in high school will be 18.8 per cent more numerous than a year ago, whereas the number of candidates for all types of high school teaching shows an increase of 10.5 per cent over last year. Next to science comes mathematics in the *rate of increase* of prospective candidates. The critical question, of course, continues to be, "How many of these prospective new teachers will be attracted to other occupations?"

On the darker side, the 1958 report shows a further widening of the imbalance between the new supply of elementary and the new supply of high school teachers. This fact is particularly disturbing because it confirms the indications of one and two years ago that the favorable trend of the 1950–55 period is completely reversed.

[1]Through its program of expanded service the NEA Research Division furnishes a copy of this report to each college and university and each urban school district. The distribution is made through the office of the official in each state department of education who collaborates in the annual national study. Usually this is the Director of Teacher Education and Certification or the Director of Research.

Elementary School Needs Greater

For many decades it was a tradition that the person who made substantial preparation for teaching — say four years of college study — would be pointed toward the high school classroom and that the elementary school teacher would, of course, be something less than a college graduate. As recently as 1950 the number of college graduates prepared for high school teaching was in the ratio of 3.04 to 1 prepared for elementary school teaching. And at no earlier time had this ratio been more favorable despite the fact that the public schools have always required elementary school teachers in the ratio of at least 3 to 2 and in the ratio of more than 2 to 1 prior to the coming of the junior high school as an administrative unit and the classification of those who taught in grades seven and eight as high school teachers.

But 1950 marked a turn. Perhaps it may be recorded as the most significant postwar educational achievement. The elementary school teacher began to display the earmarks of professional status — in quality and quantity of preparation, in salary, and in public recognition of importance of the task to be performed. Surely the most potent force in this movement was the adoption of the degree standard for *all* teachers in state after state.

Without doubt, this magnet was an important factor in attracting larger numbers of college students to the four-year program of preparation for elementary school teaching at the very moment the total number of college graduates was declining and the number electing to prepare for high school teaching was falling even faster. Here is the record:

	Graduate Preparation		
Year	*High school teaching*	*Elementary school teaching*	*Ratio*
1	2	3	4
1950	86,890	28,587	3.04 to 1
1951	73,015	33,782	2.16 to 1
1952	61,510	37,649	1.63 to 1
1953	54,013	37,430	1.44 to 1
1954	48,916	36,885	1.33 to 1
1955	49,697	37,712	1.32 to 1
1956	56,785	40,801	1.39 to 1
1957	65,062	44,029	1.48 to 1
1958	71,887	44,102	1.63 to 1

Without doubt, also, the declining enrollment of veterans from 1950 to 1955, with the consequent increase in the per cent of women in the undergraduate

Line number	Field of preparation	To graduate in 1958			Percent of total	Graduates of 1957	Percent change 1957 to 1958
		Men	Women	Total			
1	2	3	4	5	6	7	8
1	Elementary school teaching	5,935	38,167	44,102	100.0%	44,029	+ 0.2%
	High school teaching:						
2	Agriculture	1,767	13	1,780	2.5	1,772	+ 3.4
3	Art	857	1,526	2,383	3.3	2,343	+ 1.7
4	Commerce	2,657	3,815	6,472	9.0	6,025	+ 7.4
5	English	2,376	5,357	7,733	10.7	7,049	+ 9.7
6	Foreign language	622	1,212	1,834	2.5	1,615	+13.6
7	Home economics	...	4,660	4,660	6.5	4,625	+ 0.8
8	Industrial arts	3,744	163	3,907	5.4	3,392	+15.2
9	Journalism	26	42	68	0.1	75	- 9.3
10	Library science	50	337	387	0.5	350	+10.6
11	Mathematics	2,316	1,317	3,633	5.1	3,068	+18.4
12	Music	2,718	2,803	5,521	7.7	5,246	+ 5.2
13	Physical education (men)	7,777	...	7,777	10.8	6,719	+15.7
14	Physical education (women) ...	...	3,046	3,046	4.2	2,811	+ 8.4
15	Science	4,194	1,658	5,852	8.2	4,926	+18.8
15A	General science	2,174	837	3,011	4.2	2,459	+22.4
15B	Biology (only)	1,364	635	1,999	2.8	1,736	+15.2
15C	Chemistry (only)	467	161	628	0.9	543	+15.7
15D	Physics (only)	189	25	214	0.3	188	+13.8
16	Social sciences	8,423	3,749	12,172	16.8	10,866	+12.0
17	Speech	733	1,194	1,927	2.7	1,665	+15.7
18	Other	1,467	1,268	2,735	3.8	2,565	+ 6.6
19	High school total	39,727	32,160	71,887	100.0%	65,062	+10.5
20	GRAND TOTAL	45,662	70,327	115,989	...	109,091	+ 6.3

Note: In some states all graduates prepared to teach the sciences are reported under "General Science," line 15A. Many of these graduates have the equivalent of a major in Biology or Chemistry or Physics and are well prepared to teach one of these subjects.

TABLE 1. Graduates of 1957 and 1958 Prepared to Teach in Elementary and High Schools.

classes, contributed to this changing ratio. The fact stands out, however, that the trend since 1955 is an unfavorable one. The ratio of total elementary school classrooms to total high school classrooms now in operation is just over 3 to 2. It is inevitable that the greatest need for new teaching candidates will continue to be at the elementary school level. And if the elementary school teacher is to assume greater responsibility for the development of children's interests in the basic fields — say mathematics and science — the bachelor's degree should be a minimum requirement. Perhaps the really biggest task ahead, therefore, is to reverse the unfavorable balance described above and to *bring into preparation for elementary school teaching* a larger per cent of all college undergraduates who are choosing teaching as a profession.

Every District a Contributor

After recognizing the priority of the elementary schools' needs, as just described, this question faces us: Where will the recruits come from?

Perhaps the most comprehensive study of this question has been conducted by Dr. James E. Hillman, Director of the Division of Professional Services, North Carolina State Department of Public Instruction.[2] For a number of years he has sought this information from each school district: (1) How many members of the high school graduating class (and what percentage of the total) have chosen to enter preparation for teaching?, and (2) How many new teachers has the school district needed to employ each year? Stated another way, what does each district put into the pool of college students preparing for teaching, and what does the district expect to take from the reservoir of supply?

These questions pose another one: What is the responsibility of each school system to contribute to a continuous flow of qualified teachers? Dr. Hillman has found that some districts regularly contribute two, three, or even four recruits for each finished product the district claims. At the other extreme are those many districts from which comes a negligible number of recruits but which consume large numbers of new teachers each year. And there is little or no relation, in size or location, between the contributing districts and those which put little or no material into the programs of teacher preparation.

Perhaps a basic question might be stated this way: "Is there in operation in every district an organized program, sponsored by the administration and supported by the teaching staff, to identify students with natural talents for and potential interests in teaching, to provide exploratory opportunities, and to make available the most up-to-date guidance information?"

Outlook for Next September

With the 1958 placement season now in full swing, *Table 1* presents some interesting information concerning the oncoming group of college graduates.

The anticipated graduation of 44,102 seniors with preparation for elementary school teaching, when compared with the anticipated graduation of 71,887 seniors looking toward high school teaching, emphasizes the imbalance in this ratio. The 1958 class will show no increase over the class of a year ago for the benefit of the elementary schools. An increase of 10.5 per cent, however, is indicated at the high school level.

A study of the percentages shown in *Column 6* of *Table 1* brings out another problem: the distribution of prospective new high school teachers among the high school teaching fields. Nationwide data are not available on the distribution of the total staff among the teaching fields for the obvious reason that many teachers carry assignments in two or more fields and are thus difficult to classify. But a look at any local high school staff will show that the existing teaching positions are not distributed among the teaching fields in any way similar to the distribution of the newly prepared candidates to come from the colleges, as indicated in *Column 6* of *Table 1*.

An extreme case is in men's physical education, where the 1958 production will exceed the number of prospective new English teachers and will be more than twice the number of forthcoming mathematics teachers. Another example is in social sciences; members of the class of 1958 with major preparation in this field are almost as numerous as those prepared to teach English plus the total number prepared to teach the sciences.

Surely each prospective teacher should enjoy complete freedom in selecting the grade level and the subject-matter field of his choice, but this choice should be made with full knowledge of the number of existing positions and the number of prospective candidates in each field. Much up-to-date information is becoming available through national and statewide studies. Through the use of this material the counseling of these students might be made more effective.

Where Do the Candidates Go?

Almost as important as the total number of newly qualified candidates is the knowledge of what they choose to do after graduation. The employer of teachers wants them to enter the profession for which they chose to prepare. But the response varies widely among the groups fiitted for the various kinds of teaching assignments. The members

[2] *Supply and Demand of North Carolina Teachers*, State Department of Public Instruction, Raleigh, N. C., May 9, 1957, 35 pp., mimeographed.

of the class of 1957 distributed themselves this way:

Field of preparation	*Per cent of total* *Entering teaching*	*Entering other occupations*
Elementary	82.9	1.8
High school:		
Agriculture	50.7	16.3
Art	65.5	6.8
Commerce	58.8	19.4
English	70.6	5.1
Foreign language	65.4	10.9
Home economics	64.5	12.3
Industrial arts	68.0	11.8
Library service	77.6	8.1
Mathematics	68.1	11.7
Music	71.0	3.9
Phys. education (men)	63.0	7.3
Phys. education (women)	78.9	3.2
Science	62.8	10.1
Social studies	62.2	8.1
Speech	62.9	9.5
All high school fields	65.5	9.0
Combined elementary and high school	72.7	6.0

Graduate study varied widely in its appeal to these newly eligible teaching candidates. As many as 10.9 per cent of those prepared to teach foreign language chose to go on with advanced study. Next came 9.0 per cent in science; 8.7 in social studies; 8.4 in agriculture; 6.9 in English; 6.3 in mathematics; and 5.6 in music and art. At the other extreme, only 1.4 per cent of those prepared for elementary school teaching elected to continue formal study as a major occupation.

Military service took 16.5 per cent of the potential teachers of agriculture, 12.2 in men's physical education, 9.9 in industrial arts, and 7.2 per cent in mathematics, but only 0.8 per cent of those prepared for elementary school teaching. Homemaking took 12.3 per cent of the new potential teachers of home economics, 6.6 in women's physical education, 5.2 in commerce and English, and 4.6 of those prepared for elementary school teaching.

What action the members of the class of 1958 will take cannot be determined at this early date. But, if they follow the pattern of last year's class and 73 per cent of them enter classroom service, the net new supply will be some 85,000 teachers. This is a far cry from the total needs of the elementary and high schools next September.

What Will Be the 1958 Demand?

The realistic need for teachers to open the 1958–59 school year will be as follows:

To replace those leaving	95,000
To relieve overcrowding	30,000
To serve increased enrollment	25,000
To add necessary services	10,000
To replace the unprepared	60,000
Total needed	220,000
Prospective supply from the Class of 1958	85,000
Apparent shortage	135,000

The figure of 135,000 will not be a concise measure of the shortage next September because new teachers will be drawn from other sources in the general population. Some of these new teachers will have excellent qualifications; some will be partially qualified; some will no doubt be hopelessly unequal to the tasks assigned to them. And after the unanswered question about the professional readiness of these newly employed teachers comes this even more critical one: *How many of total needs (220,000) will go unmet?*

Past experience indicates that: (1) probably almost all of the 95,000 vacated places will be filled, and (2) much of the other four categories of need will go unmet. In particular, the threat of further overcrowding hangs over the elementary schools; the largest increase in enrollment will strike here, and the most aggravated conditions now exist here. For this reason the NEA Research Division has conducted a nationwide study of class size in the elementary schools of all urban districts.[3]

What Is Overcrowding?

Every school district must decide for itself about the educational opportunities it will provide for its youth. One major question is class size. How many small children shall be thrust into a room under the instruction of one teacher? The National Education Association has continuously sought to maintain this basic principle: The educational welfare of the pupil should be the criterion.

The report on current conditions shows these facts: In urban school districts 10½ million elementary school children are in classes of more than 25 pupils each; 7 million are in classes of more than 30; 2½ million are in classes of more than 35; ½ million are in classes of more than 40; and 150,000 are in classes of more than 45 pupils each. Surely nobody who understands the function of the elementary school today will undertake to defend these conditions.

Table 2 shows the number of *additional* classrooms and *additional* teachers needed to bring about certain reductions in the 1957–58 conditions. The figures presented in this table do not take into account the anticipated increase in enrollment next September. They do, however, point up the overriding need for drastic action on the national level. It is common knowledge that a great many local districts cannot hope to correct existing inadequacies, to say nothing of meeting future requirements, within the framework of their present financial structure.

[3] *Class Size in the Elementary Schools of Urban School Districts*, 1957–58, Research Division, National Education Association, Apr., 1958, 20 pp., planographed, single copy, 50 cents.

Size of school district	Total number of urban school districts[a]	Estimated total number of classes	Estimated number of additional classes (and teachers) necessary to reduce excessive size classes to 25 pupils	30 pupils	35 pupils	40 pupils	45 pupils
1	2	3	4	5	6	7	8
500,000 and over[b]	18	66,494	22,476	9,542	2,816	676	198
100,000 to 499,999	118	91,653	24,073	8,105	1,544	190	38
30,000 to 99,999	377	80,993	15,281	4,378	793	124	28
10,000 to 29,999	1,137	98,041	18,505	5,393	1,010	192	51
5,000 to 9,999	1,172	51,406	9,180	2,630	491	96	34
2,500 to 4,999	819	23,014	4,045	1,182	228	33	9
Total	3,641	411,601	93,560	31,230	6,882	1,311	358

a/ Excludes school districts having secondary grades only.
b/ All eighteen districts in this group reported; figures shown are those reported and involve no estimates.

TABLE 2. Estimated Number of Additional Elementary School Classes (and Teachers) Necessary to Reduce Excessive-Size Classes to Certain Designated Sizes, Nov., 1957.

Seven Keys to Evaluating Teacher Competence

A specific and detailed definition of seven **essential criteria** upon which the supervisory staff can launch its evaluation program. Rather than considering how well the teacher accomplishes her major goals, these key criteria judge the teacher's skill and effort in the **specific techniques** she must use in order to attain teaching's major goals. Sample questions are included to help the evaluators determine the teacher's competency in (1) **Preparation and Planning,** (2) **Recognition of and Provision for Individual Differences,** (3) **Motivation,** (4) **Exhibition of Command of Subject Matter,** (5) **Teaching Techniques,** (6) **Classroom Control,** and (7) **Classroom Atmosphere.**

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It can be said that evaluation is basic to all human endeavor. There is no human enterprise in which people are not being evaluated as to the quality of their contributions, either through comparison with one another or through a set of standards which have been selected as those to which all can, and should, aspire.

Evaluation Defined

Evaluation can be briefly defined as "the qualitative judgment of services rendered by the individual." It is worthy of note that in all of the social professions except teaching, the *recipients* of the services rendered by the individual professional practitioners are the ones who *evaluate the quality* of these services. In addition, it is of particular moment that in all of the social professions except teaching, the recipients of the services rendered are free to express their satisfaction or dissatisfaction of these services, and further are free to sever connections with the practitioner.

The doctor who is consistently wrong in his diagnoses soon loses his patients to an abler colleague and immediately feels a corresponding dip in his income. The lawyer who fails to prepare effective briefs soon encounters a scarcity of clients and a decrease in revenue.

Not so, however, the teacher. So long as he continues to meet the *minimum standards* set up within the school system, his 30 "clients," urged on by parents, state laws, and the local school board, continue to troop through his door 180 days of the year. Moreover, though his services be sub-standard, his salary is quite likely to be as good as his abler colleague of equal training and years of experience.

Evaluation Precedes Merit

Be this as it may, any system of merit pay *must be preceded by an impartial plan of evaluation,* in which the determination is fairly made *as to who is deserving and who is not.*

If the teacher evaluation procedure is to be more than a spurious one, which is worse than none at all, the evaluator must have certain specific criteria upon which to base his observations. It is in this area that most of the confusion surrounding merit rating exists, and for a very good reason. There are any number of teacher rating sheets available, none of which bear any resemblance to the other. In addition, the list of areas in which a teacher can be evaluated runs into the hundreds. Small wonder that both teachers and administrators approach the subject gingerly.

Evaluate Fundamental Techniques

In evolving a plan of evaluation, the basic question to be answered is the following: "What criteria are basic to

all good teaching?" Or, specifically, "What general fundamental techniques must a high school teacher of English use that are also required of the teacher of Latin III, and that the second grade teacher cannot omit if she is to maintain worthwhile standards of instruction?"

The success with which this question is answered will govern the eventual success or failure of any evaluation program or merit plan. Indeed, it is in the selection of criteria that most merit plans go astray from the beginning.

Let us see how this occurs. The merit committee, after long and serious study, has come up with the following criteria of teacher worth. The superior teacher:

1. Achieves desirable pupil change in intellectual skills.
2. Fosters worthwhile social and emotional growth.
3. Promotes citizenship and pupil cooperation.
4. Encourages worthy use of leisure time.
5. Develops interests and appreciations.

In looking these criteria over we can see that they are indeed valid statements of what teachers should ultimately accomplish. No one will deny, for example, that all teachers should "foster worthwhile social and emotional growth."

Nevertheless, if we are to use these principles as areas of evaluation, the evaluators are being asked to evaluate *how well the teacher accomplishes her major goals,* instead of evaluating her skill in the *specific techniques which she must use in order to attain these goals.*

The former, because of their nonspecific nature, are, admittedly, very difficult, to evaluate objectively, and from such attempts has sprung the statement: "There is presently no valid means of measuring teacher worth."

In order to assist those school systems interested in devising useful criteria for the evaluation of teacher effectiveness, the following seven essentials of teaching success are presented as being among those which might be considered basic in the evaluation of teaching effectiveness. By way of clarification, each area includes a sampling of the questions which evaluators will need to ask themselves in determining a teacher's competence within each of the areas.

Those who study the material will be interested in noting that the seven areas are related to three essential elements required for success in all human endeavor:

1. Effort

2. Skill in the specific techniques of one's calling

3. Enthusiasm (defined by Webster as "ardent zeal, or interest")

Indeed, although it is not the intent of the writer to pursue the topic further here, it is suggested that the start of a very interesting and revealing study of relative teacher competence might be made by dividing a school system's entire teaching staff into two major groups: Those who show an *above* average amount of effort and enthusiasm in their daily work, and those who do not.

We are inclined to wonder into which group the supposedly elusive and unidentifiable "outstanding teacher" would fall.

Seven Basic Areas of Evaluation

Area I — Preparation and Planning: This is the area wherein some teachers, provided pedagogues were paid on an hourly basis, would have their salaries almost doubled immediately. One of the heart-warming aspects of working with teachers is in seeing the way some willingly put in hours of preparation every day in order that they might come to school the following morning *prepared to teach.* These people recognize that there is no substitute for sound preparation and govern themselves accordingly.

On the other hand, it must be said that somewhere along the line some teachers apparently have conceived the idea of leaving school when the children do. Unfortunately, a number of others have followed suit.

It is a matter of continuing wonder to the writer that this *phenomenon of exodus* has become so widespread that in many systems it is taken for granted that the teachers have a moral right to leave with their pupils.

Fortunately, however, most teachers are in agreement that proper preparation pays off in increased benefits to the pupils in the classroom. In determining the extent of the teacher's preparation, the evaluator may want to ask himself the following:

1. Is the teacher willing to take the time to prepare her material?
2. How well does the teacher seem to know each of her pupils?
3. In what ways does the classroom itself show evidence of preparation?
4. Has the year's work been arranged into time units?
5. Are lesson plans well organized and made out ahead of time?
6. Is the classroom routine well managed? Do things move smoothly from one lesson to the next?
7. Are pupil assignments on the board before the lesson begins, whenever possible?
8. Are pupil activities planned to go along with the lesson, when practical?
9. Does the teacher make use of guide book and manuals (an absolute essential, particularly in the case of reading instruction)?
10. Does the teacher allow annoyances or trivia to disrupt the lesson?

Area II — Recognition of and Provision for Individual Differences: One of the best ways for a teacher to improve her teaching effectiveness is to get to know each of her pupils thoroughly. This admittedly takes time but, again, this is one of the trademarks of a superior teacher.

The high school teacher is in no way exempt in this respect simply because she does not spend the entire day with a single group of students. She may not, in the course of a half year or more, get to know each of them as well as she might like to, but in every secondary school room there are youngsters who need special attention, and the secondary school teacher can use up all of her spare time, and more, working with these.

In evaluating a teacher for effectiveness in this area, the evaluator may want to ask:

1. Is the teacher concerned with all aspects of growth of the child; mental, physical, emotional, and social? (The evaluator will want to know in particular if the teacher is cognizant of the importance of providing for the satisfaction of the basic emotional needs of the children entrusted to her care.)
2. Is the teacher aware of the importance of pupil readiness for each new subject matter presentation?
3. Does the teacher utilize pupil records such as IQ's, achievement tests, permanent record and health cards to further her understanding of each child?
4. Are the pupils grouped according to ability?
5. Is extra help given to those requiring it during and after class?
6. Does the teacher really *challenge* the superior pupil?
7. Are assignments based on several levels of difficulty?

Area III — Motivation: The ability to instill in her pupils intent interest and a strong desire to learn is that major attribute which can lift a teacher from the ranks of mediocrity to the pedestal of superiority.

To the observer in the classroom, true motivation is not difficult to perceive, because it radiates from the *enthusiasm* of the teacher herself. There is life in these classrooms, and fortunate are the pupils who go to school to such teachers.

In judging the degree of motivation provided by the teacher, the evaluator might ask:

1. Does the teacher *stimulate* the pupils through her own *enthusiasm?*
2. Does she use encouragement as a form of motivation?
3. Does she note when pupil interest is flagging and take steps to renew it?
4. Does she plan beforehand how best to arouse pupil interest in the particular subject matter being taught?
5. Does she relate the subject matter to the pupils' own interest and experience as much as possible?

6. Does she introduce each lesson in as interesting a manner as possible?
7. Does she encourage pupils to appraise their own growth?

Area IV — Exhibition of a Command of Subject Matter: A good teacher should not only be a student of her subject, but should be articulate in it as well. For example, an outstanding high school teacher of history will seize upon each opportunity to bring her subject to life. Her wide reading makes her eager to tell her students of the behind-the-scenes bickering of the Civil War generals which was of such childish nature that it almost drove the patient Lincoln to despair. But in addition, her articulateness will extend to the point that she is able to present the Bill of Rights with such insight that her students will leave her with a deepened understanding of their country's heritage.

The following are some of the things the evaluator may be interested in determining:

1. Does the teacher keep up with new developments in her field?
2. Does she keep informed as to current trends in educational philosophy and their impact on methods of teaching her particular subject or grade?
3. Can she be considered an expert in her own subject matter field?
4. Does she present the subject matter with a view to pupil understanding?
5. Does she point out the practical use and application of subject matter?

Area V — Teaching Techniques: There are any number of effective classroom teaching techniques utilized by the skilled teacher. Some of the following are among the ones which the evaluator might be interested in watching for.

Does the teacher:

1. Employ a variety of teaching methods (lecture, experimentation, demonstration, etc.)?
2. Ask for and act upon pupil ideas?
3. Utilize tests as a means of instruction?
4. Employ constructive, rather than negative, criticism?
5. Display pupil work and accomplishments?
6. Utilize available library service and audio-visual material?
7. Provide for active pupil participation, when practical (i.e., reports, dramatizations, panel discussions, committee work, field trips, projects, etc.)?
8. Realize the necessity for practice and drill, but strive to make the necessary repetition as interesting as possible?
9. Stress and review major points of the lesson?
10. Strive for 100 per cent pupil participation?

Area VI — Classroom Control: Proper classroom control is essential to the learning situation. The evaluator will want to see, not only that control is present, *but how it is achieved*. The wise teacher chooses to lead her class in a democratic way, considering herself a guide instead of a taskmaster. The effectiveness with which she handles her class will depend to a large extent upon her own personality and her *degree of maturity*.

The evaluator may well ask whether the teacher:

1. Shows evidence of maturity
2. Receives the co-operation of pupils without having to resort to shouting or nagging
3. Allows pupil voice in classroom affairs
4. Has the respect of the pupils
5. Shows pupils the same courtesy she expects of them
6. Has a sense of humor
7. Adjusts well to difficult or unpleasant situations
8. Is always "on top of" the classroom situation
9. Teaches democracy by practicing it.

Area VII — Classroom Atmosphere: Among other things, a teacher's job entails maintaining a neat, efficient classroom and providing a pleasant atmosphere in which her pupils can feel at home.

The evaluator will want to know if the teacher:

1. Provides her pupils with an example of neatness and order
2. Considers pupils' size, hearing, and vision when assigning seats
3. Keeps a check on room ventilation, heat, and light
4. Keeps her bulletin boards and project tables up to date, and relates them to current subject matter presentation
5. Creates a cheerful room atmosphere which encourages her pupils to "feel at home away from home."

The writer would like to stress that the foregoing criteria for determining a teacher's effectiveness are by no means presented as all-inclusive. They are merely a guide to school systems interested in devising their own plan of evaluation.

There are those who will say that it is impossible to measure all that a teacher does. To this the writer is in perfect agreement. To attempt to measure, for example, how well one fifth grade teacher develops an appreciation of music as compared to another, and relate this specific talent to her all-round effectiveness as a teacher would be the height of folly, because we could attempt the same in a hundred other areas.

There are those who will say that a physics teacher needs knowledge and skills not possessed by the third grade teacher, and vice versa. Again, we are in accord.

However, no matter how great the individual's command of his own subject matter field, if he does not "plan and prepare his work," "provide for the individual differences of his pupils," "instill in his students interest and a desire to learn," and "strive to provide the right type of learning environment," etc., he will, despite the extent of his technical knowledge, remain a "purveyor of facts," rather than evolve into a truly professional teacher who is both guide and inspiration to his pupils.

The closer the evaluation procedure is designed to measure those basic things which all teachers must do in order to make the presentation of material *as meaningful as possible to each of the pupils*, the greater the facility with which we will be able to recognize, and perhaps reward, our outstanding teachers.

Evaluation Essential With or Without Merit

In any discussion of teacher evaluation it should be pointed out that evaluation itself is an incentive for better teaching. In line with this, the writer suggests that all school systems may well consider a formal evaluation program, if only to give the professional teacher the *recognition she deserves*. In many systems the most the teacher who is literally "giving her all" can expect is an occasional visit from the principal, a pat on the back now and then from an appreciative parent, and a yearly form letter from the superintendent which states that she has been rehired at the same salary as the half-time practioner next door.

All humans crave recognition, and teachers are no exception. *Evaluation itself is a form of recognition for the good teacher.*

Evaluation Helps Substandard Teacher

On the other side of the ledger, evaluation helps substandard teachers by pointing the way to improvement. Evaluation of basic teaching techniques focuses staff attention upon these vital areas. Why can't we believe that, if teachers know they are to be evaluated upon their proficiency in, say, motivating their pupils and in the way in which they provide for individual differences, there will be a *general and system-wide improvement in those areas*, if only because teachers are caused by evaluation to think about them?

In the final analysis, everyone, including the teacher, is interested in the improvement of the quality of education afforded our young people. Since evaluation is basic to the improvement of instruction, let us not apologize for courting it. Let us insure, however, that what we evaluate is worth evaluating, and serves the purpose for which it was intended.

If, in the process, we uncover those truly professional practitioners of the art of teaching, and deem it wise to suitably reward them, so be it.

Several pertinent thoughts on how to modernize our program of —

Physical Education for Today's Youth

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No one dares doubt that good health and physical fitness are essential for an individual's success in whatever endeavor he chooses for a life's work. Our professional leaders today, as of yesteryear, know that children and youth need sound foundations not only physically but mentally, socially and morally if they are to enjoy life in a wholesome manner and to its fullest extent.

Health and physical education today are not the same as they were formerly. The modern program of physical education cannot be chock-full of formal drill with its rigid discipline. It cannot, even with the emphasis on the findings of the Kraus-Weber Tests, smack solely of muscle building. The program must be planned to meet the needs of modern youth and adults in a modern society.

As a young physical education major, I was required to memorize the following:

"The modern aim of physical education is not to supply great muscular strength nor acrobatic ability, but to develop wholesome, energetic, and vitally strong human beings, capable of withstanding the ordinary strains of life and successfully coping with competition in their chosen field or profession."

The above statement of aim was firmly engraved in my mental processes. I am not so sure, some 26 years later, whether or not it is exactly quoted nor to whom the credit should be given for having originally said it. It has, however, been a guiding light and beacon to me as a professional worker in the field.

Modern Implications

If we are to carry out this modern aim so that physical education will be for modern youth in a modern society, what implications does it hold for us? First, let us look at the "not to supply great muscular strength nor acrobatic ability but to develop wholesome, energetic, and vitally strong" individuals. The muscle building and the skill are secondary to the over-all good health and vitality which they originally were designed to develop. We must then not lose sight of the "why" of the muscular development and the skill training. It is apparent that this foundation, which must be developed for the individual's *body building*, is one which should be *laid* early in life. We cannot wait until *next year*, or for the high school, or for the *last two weeks in August*. We must build that foundation early. The Humanists of the Renaissance knew that the young must be given physical exercise and *grave exertion* in order to have them be able to bear out the strain of adulthood. The program of foundation-laying and body-building must be done in the elementary school. We must be alert to the insipid *play* programs called physical education.

While this foundation is being laid, the boy and girl should learn the skills of the various sports activity which are indigenous to his or her cultural pattern. After securing this strong basis for development there is need to continue

"The program of foundation-laying and body-building must be done in the elementary school. . . . While this foundation is being laid, the boy and girl should learn the skills of the various sport activity which are indigenous to his or her cultural patterns."

with the skill program and the teaching of the so-called carry-over skills.

A well-known head coach of a major university football team has asked me, "Why did I not receive the benefits of the learning and the skills of carry-over sports activities? Why did they have to so concentrate on my football prowess that I had to make 'all this' and 'all that' when today as a coach I like nothing better than a fast game of tennis or a good game of golf." Yes, even the professionals in sports activities bemoan the lack of beneficial experiences in recreative skills.

Intramural Programs

Another definite need is the improvement and extension of intramural programs. If any game is good for a few, it is good for the many. It is difficult for anyone to condone the expenditure of monies for varsity groups under the guise of certain educational advantages without giving the same philosophical and financial support to a broad program of intramurals. No one of us would eliminate the interscholastics of the high schools or the intercollegiates of the colleges, but we would like to see all students of lesser aptitudes and less intense interests in sports enjoy the benefits of the same activities at an intramural level.

Another challenge and, of course, a definite trend is to use the research now being conducted in the area of competitive sports activities. As the anthropologists and physiologists are adding to our store of knowledge of the growth and development peculiarities of youth at various ages, we are beginning to question certain program activities which were based upon historical foundations rather than scientific ones. Today, we find many seeking the help of research specialists in an attempt to find the truth and to pull their programs into line with a sound outlook for America's children and youth. This is a healthy sign and a definite trend. When the research specialists and scientists have added to our store of knowledge, we must use it. It is not to be stored in dusty file cabinets to be used only in graduate courses in professional curricula. If we do this, we will continue to duplicate our previous errors in program development and activity areas.

Meaningful Activities

We are also challenged to make our program meaningful to modern youth. Not long ago I heard of parents who desired their youngster (she was not quite school age) to have some group experience. These well-meaning parents enrolled the youngster in a dance school. The first lesson which the parents witnessed was a model. Soon the youngster was "dropped off" and "picked up." Many weeks later the young father decided to find out what the child was learning. Upon pressing hard, the child said, "tap dancing." The father was disturbed, but asked to see a sample. The child with more urging did a brush, tap, step — brush, tap, step. With mixed feelings the father complimented the child who got as far as the entrance hall and who responded to her father's "That's fine, fine" with a "But Daddy, what do I do with it?" Yes, we must make these activities meaningful to the child. Muscle building and skills for later life are fine, but what about now?

Another challenge is inherent in our modern society and its basic needs for human life. History has taught us that as the methods of warfare improved and became more complex there came with it a lessening of emphasis upon the individual's being physically fit. For example, when hand-to-hand combat was the only method of warfare the individual's life depended upon the individual's fitness. As chance death entered into warfare by a stray bullet even the strong and prepared met death. I have often repeated in lectures in the history of physical education that we rejected our Doughboys because they had flat feet, for in 1917–18 it was a marching war. The standards were said to be lowered in World War II and although there have been no records investigated which showed of rejections because of calloused *glutti maximi*, it was a sitting war. Will the soldiers of future wars be rejected because of calloused index fingers in push-button wars? I ask these questions because modern youth in a complex society with its seeming lack of the need for physical fitness in daily living still has the same biological inheritance of earlier cultures. Youth still has the same physical equipment. Youth still has the need for social skill learning. Yes, times have changed as has man's cultural pattern, but the need for physical education has remained the same.

Thus it seems that the challenge to us and the trends we see lead us to provide activities and methods of teaching physical education activities, which are intended for physical fitness, which are meaningful, which are for present and future leisure, through a program of physical education activities as well as sports for all. We still have need of physical education as we do transportation, but that is no reason for us to hold on to "horse and buggy" physical education. We must modernize and jet-propel our physical education in this modern world if we are to make this area meaningful to modern youth.

Physical Education for Girls:

Tumbling (left) teaches co-ordination and teamwork, while bowling at the local YMCA (above) is a popular activity.

A hockey class conducted at a city park near the school

Educational Programs of the National Science Foundation

ELAINE EXTON

Although the future of new authorizing legislation to permit carrying out the Administration's space-age education plan proposed for the Department of Health, Education, and Welfare remains in doubt as the Congressional Easter recess began, a substantial part of the appropriations increases President Eisenhower requested to expand the National Science Foundation's programs in support of education and training in the sciences was halfway through Congress.

Congressional Action

In reporting out a $6.5 billion money bill to maintain 16 independent federal agencies in the fiscal year starting July 1, the House Appropriations Committee approved a $115 million outlay for the National Science Foundation for 1959. Though this sum is $25 million under the $140 million expenditure the President recommended, it is nearly three times as much as Congress appropriated for the Foundation's operations in the last fiscal year ($40 million).

Reminding that science is now "a magic word" in Congress in that the Senate's action on appropriations measures is traditionally more liberal than in the House, some seasoned Capitol Hill observers believe the Senate will provide a larger amount, perhaps even voting the full $140 million proposed in the President's 1959 budget whose estimates allot more than half this sum to expanding the National Science Foundation's special activities in stimulating and improving science education — $82 million, including $3 million for administrative expenses, or about five times as much as the $14.5 million for this purpose in the agency's current $40 million budget.

This will be in addition to the funds made available by a supplemental appropriations bill providing $8,750,000 for the National Science Foundation for the remainder of the fiscal year 1958 which has already passed the Congress. Just over $5 million of this amount will be used to enlarge the Foundation's fellowship, institutes, and course content improvement programs.

Nature of Program

In his budget message President Eisenhower termed the emergency, national-security-related program of aid-to-education to be administered by the Department of Health, Education, and Welfare[1] if the enabling legislation he is seeking is enacted "carefully designed so as to complement, not duplicate, the program of the National Science Foundation." Actually there are several points of demarcation between the educational programs proposed for these two federal agencies.

The National Science Foundation, for instance, which began its operational existence in the spring of 1951 under a Congressional Act establishing it as a new independent agency of the Executive Branch of the Government, deals solely in areas related to science, including math and engineering, mainly through scientific societies and science departments of colleges and universities, while the U. S. Office of Education would be in charge of projects which embrace other fields as well or which are channeled through State Departments of Education.

Moreover, though certain projects of the Administration's proposals involving the Department of Health, Education, and Welfare call for $127,755,000 in 50-50 matching funds by state and local units over a four-year period, no such matching provisions are required for the National Science Foundation's undertakings in the area of science education.

In Congressional testimony clarifying the distinction between the scholarship programs proposed for the U. S. Office of Education and for his own agency, Alan T. Waterman, the National Science Foundation's Director, made plain that the *scholarships* to be covered under *Office of Education* arrangements would be for *undergraduate* students in *all fields*, whereas the *Foundation's* funds for student assistance will be used for "*fellowships* which grant direct support *to highly-qualified graduate students, high school and college teachers, and active research scientists to improve their competence through additional work or study*," including postdoctoral, in the mathematical, physical, medical, biological, and engineering sciences, as well as anthropology, psychology, and other areas in which the social and natural sciences converge.

"In the graduate schools," he declared, "the distinction between our fellowship programs and the one proposed by the Office of Education (is that) their emphasis will be on teacher training, whereas ours is on research. . . . Theirs emphasizes teaching and other subjects besides science. So it is quite complementary. . . . Our fellowship program is now expanded to those who actually have advanced degrees, both younger postdoctorate fellowships and senior postdoctorate fellowships (for) persons who have been out of college for a long time and who take a year out for research.

Noting that the Foundation also awards fellowships to permit "college science teachers or research scientists to get away from their home institutions and go to another institution for research or teaching study," he explained that "this enables them to get a fresh start in their field when they have been overloaded for many years with a heavy schedule," likening this to a sabbatical year.

Graduate Fellowships

Since the National Science Foundation began its fellowship program in the fiscal year 1952 to help improve the quality of today's pool of young scientists, some 4500 men and women have been given stipends for advanced study in the sciences. The $21 million sought for this purpose in its new budget is $17,735,000 above its estimates for this year. Of this amount $6,400,000 is to furnish the financial wherewithal for 1570 graduate fellowships in its established predoctoral, postdoctoral, and college science faculty programs.

The increase also encompasses funds for supporting 6550 fellowships in four new categories, namely, Summer Fellowships for High School Teachers of Science and Math (2500 at $2,000 each), Summer Study Programs for Graduate Teaching Assistants of Science and Math (2000 at $800 each), Pre-Service Teacher Training Grants (800 at $3,750 each), and Training Grants for Graduate Students (1250 at $2,000 each), the last-named to be accompanied by a $2,000 grant to the institution the grantee attends thereby increasing both the number of graduates and the facilities for graduate education in the sciences.

National Science Foundation Fellowships

[1]For a description of the Administration-backed plan proposed for the Department of Health, Education, and Welfare, see "News from Capitol Hill" in the April, 1958, issue of the AMERICAN SCHOOL BOARD JOURNAL, p. 54.

are awarded to United States citizens on a competitive basis. Qualified persons may obtain application forms and other necessary information from the National Science Foundation, Washington 25, D. C. Typically the number of applications in the established fellowship programs exceeds the number of awards by a factor ranging from three to eight.

Application requirements and submission deadlines vary from program to program. All predoctoral fellowship candidates must take special examinations testing scientific aptitude and achievement administered by a responsible national testing organization. The test scores are sent to the National Academy of Sciences — along with other application materials — where they are reviewed by panels of scientists who screen the applications and prepare an evaluated list from which the National Science Foundation chooses the candidates of the highest ability to receive the awards.

Training Institutes

The largest request in the Foundation's science education budget — $35.5 million, an increase of $25,710,000 for 1959 — is for training institutes to improve the subject-matter knowledge of science and mathematics teachers drawn from all levels of our educational system.

Commenting on the value of this program in testimony before a House Aprporiations Subcommittee, President Samuel M. Nabrit of Texas Southern University, a National Science Foundation board member, called these courses "one of the most worthwhile investments which has been made in the entire field of science, because in this way we can broaden the base of competence from which we can draw talent in the future."

If Congress approves, these funds will be used to extend the scope of this training course program from a total of 155 institutes involving 7000 teachers in 1958 to 800 institutes involving 32,000 teachers in the fiscal year 1959. Besides allowing for expansions in existing activities, these figures include 210 new institutes providing for 7900 participants in programs especially designed for college teachers, faculties of technical schools, and elementary school teachers and supervisors.

Each co-operating institution of higher learning to which a Foundation grant is made is responsible for planning the program of study, course preparation, selection of instructors and of teacher-participants, and all routine administrative details. Instruction is given by scientists chosen for their competence in specific fields.

The grant the co-operating college receives covers not only the tuition and fees for each participant but a round-trip travel allowance (except in the case of in-service institutes), plus a stipend which averages about $75 per week, and dependency allowances of $15 per week per dependent, to a maximum of four.

Of the $35.5 million, the lion's share is allotted to the summer institutes program which began with two institutes in 1953 and will reach 17,900 teachers at 360 training centers in the new fiscal year if the Foundation's plans are realized. Sixteen thousand of these participants will be high school teachers, or ten per cent of the estimated number who are eligible. For the first time provision is being made for 1500 elementary school supervisors to obtain further grounding in the fundamentals of math and science.

National Science Foundation Director Alan T. Waterman attributes much of the success of these summer institutes, which require full-time attendance for four to ten weeks at a time when teachers are free from classroom duties, to the fact "that the co-operating colleges and universities have been successful in their efforts to devise unified programs for the participants which include not only formal study in the usual classroom setting, but provisions for special educational experiences like laboratory work, field trips, informal as well as formal seminars, and special lectures by noted scientists on topics of current interest."

Under the Foundation's new budget, academic-year institutes, primarily for high school teachers with bachelor's degrees who wish to upgrade their subject-matter knowledge, will be increased from 19 attended by a total of 900 teachers in 1958–59 to 30 reaching 1500 teachers during the school year 1959–60.

In-service institutes for secondary school teachers which afford two or three hours supplementary subject-matter training per week at night or on Saturdays during the school year, will be increased from 30 to a total of 200 accommodating 5000 teachers during the 1959–60 academic year. In addition, the Foundation hopes to support 150 in-service institutes for elementary school teachers in 1959–60.

Since admission to all the institutes is controlled by the sponsoring institution, interested persons should apply directly to the co-operating college of their choice. A list of the places offering these courses and general information leaflets are obtainable from the National Science Foundation, Washington 25, D. C.

Special Projects

The Foundation's projected budget allows $15.4 million for experimental testing and developing of promising new ideas for strengthening science instruction. Ten of these pilot-type projects are concerned with student participation, four with teacher improvement, and one with special field institutes in areas of acute scientific personnel shortages.

The seven already established programs range in nature from *Traveling Science Libraries* that loan selected books to secondary schools (service to 1500 schools sought) and *Traveling Science Demonstration Lectures* that bring high schools instructional materials on such subjects as solar radiation, atomic structure, nuclear reactors, and other topics of scientific interest which are beyond the capacities of local resources to provide (support for 3600 school visits requested), to a *Career Information Program* set up to furnish guidance counselors and teachers with reliable data on scientific careers through new materials and at short-term institutes.

Eight new undertakings account for approximately $5.8 million of the $11.5 million sum earmarked for special projects. These include *Secondary School Student Training Programs* to give able high school juniors and seniors (about 4000) science training during the summer in a college setting before graduation, *Grants to Colleges for developing "enriched" instruction in science and math* for "high-ability students" *in nearby high schools* (16 programs to affect 160 secondary schools), and a *Teacher Self-Improvement Plan* to facilitate home study in the sciences by loaning elementary and high school teachers reference materials, study guides, and correspondence courses.

Course Content Improvement

Encouraging revision and updating of science course content and full utilization of such supplementary teaching aids as films, television, and low-cost laboratory equipment to improve instruction is another activity supported by the National Science Foundation whose 1959 budget includes $6 million to further these aims.

As Alan T. Waterman, the Foundation's Director, advised the Senate Committee on Labor and Public Welfare, "a modern student does not like to study what you might call classical science when he sees in the newspapers and periodicals current research and finds that what he is told by his teachers has very little to do with that." There is considerable evidence that apt students are turning away from science careers in too many instances because of the uninspired presentation of outdated subject material, he stressed.

If the activities contemplated by the Foundation to remedy this situation are actually carried out, they may usher in a revolution in the instructional material available to teachers. Such a Foundation-supported program has already been initiated in physics, and the increased money requested by the Foundation would make it possible to begin similar programs for mathematics, chemistry, and biology.

The study in physics is being conducted by a committee made up of scientists from a number of American colleges and leaders in secondary school physics instruction from various parts of the country.[2] Known as the Physical Science Study Committee, this Committee is based at the Massachusetts Institute of Technology.

After examining the content of physics courses at the high school level, its members have written a textbook which is now in draft form and will be tried out this summer at Foundation-supported teacher institutes. Accompanying monographs are being prepared to amplify text material with descriptions of applications. New Laboratory demonstration experiments, using equipment easily made with cheap materials are being devised and a series of 20-minute films depicting difficult and unusual experiments are being made.

It may be at least two more years before these various components are ready for trial use on a fairly broad scale. Meanwhile action has been initiated looking toward formation of a nonprofit organization to handle the development, production, and distribution phases of this course content improvement enterprise.

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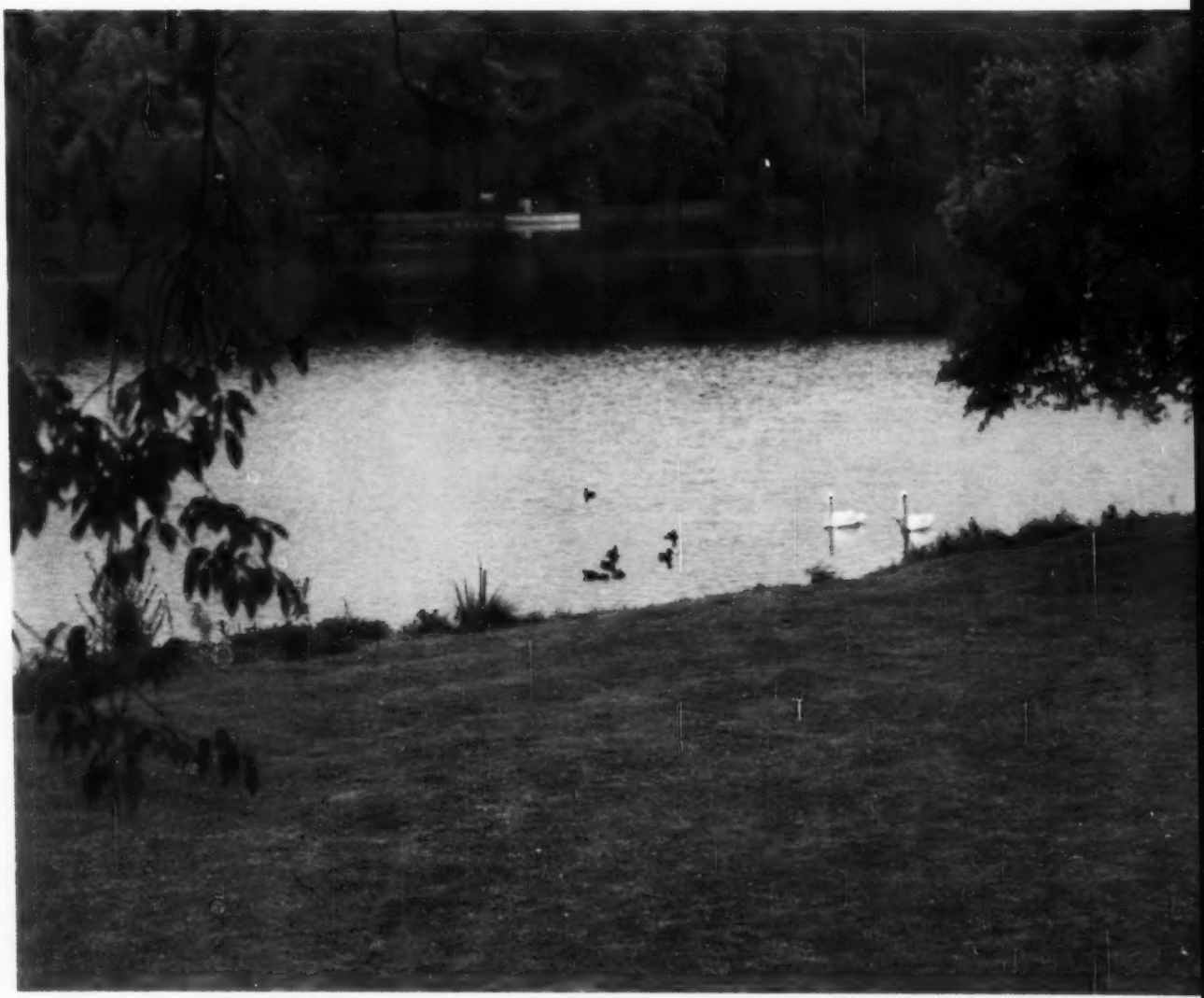
[2]For a more detailed account of the plans, achievements, and prospects of this Physical Science Study Committee, see the November, 1957, issue of *The Science Teacher*, pp. 315–330.

IF CLASSES WERE HELD OUTDOORS . . .



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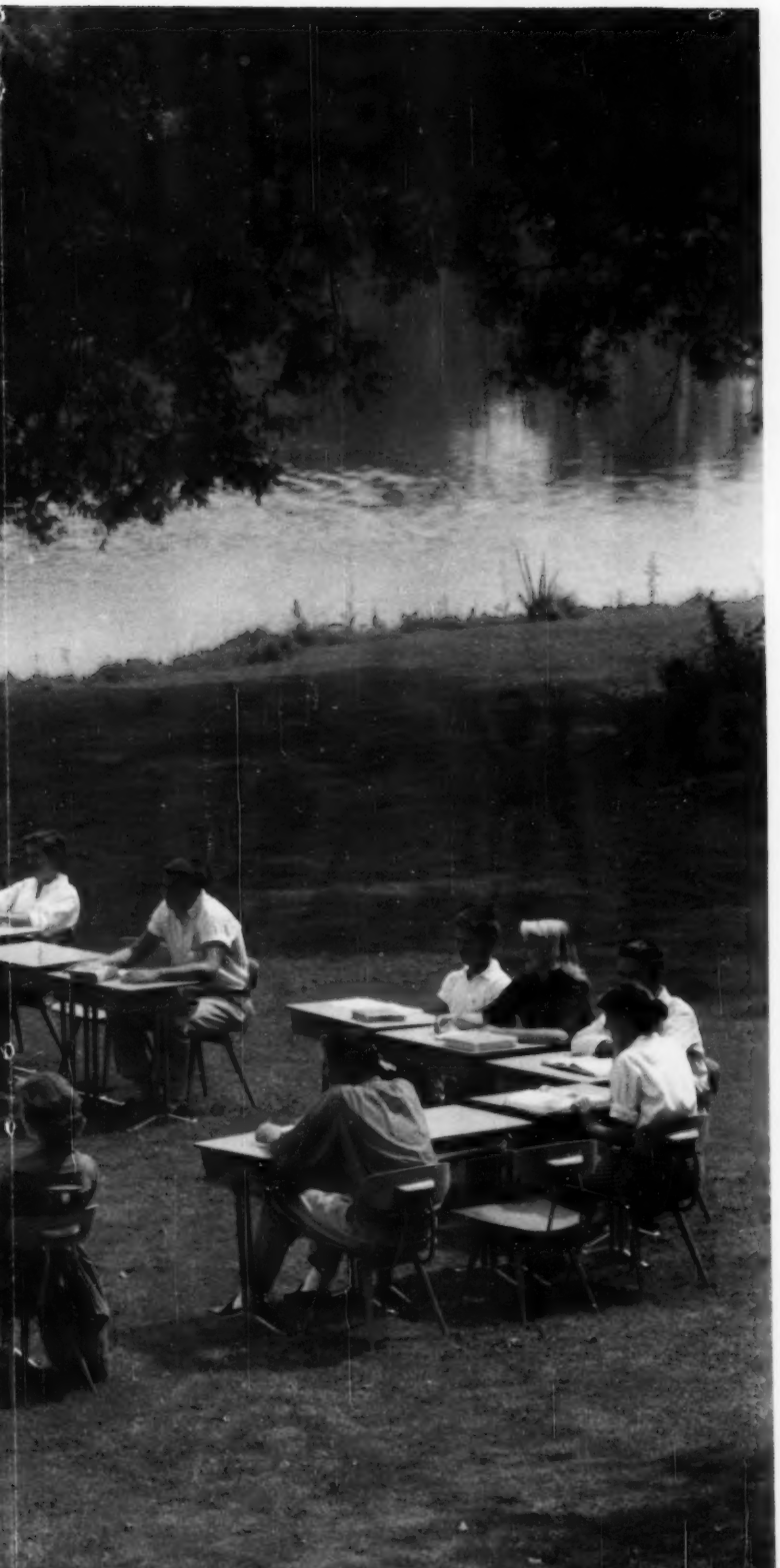

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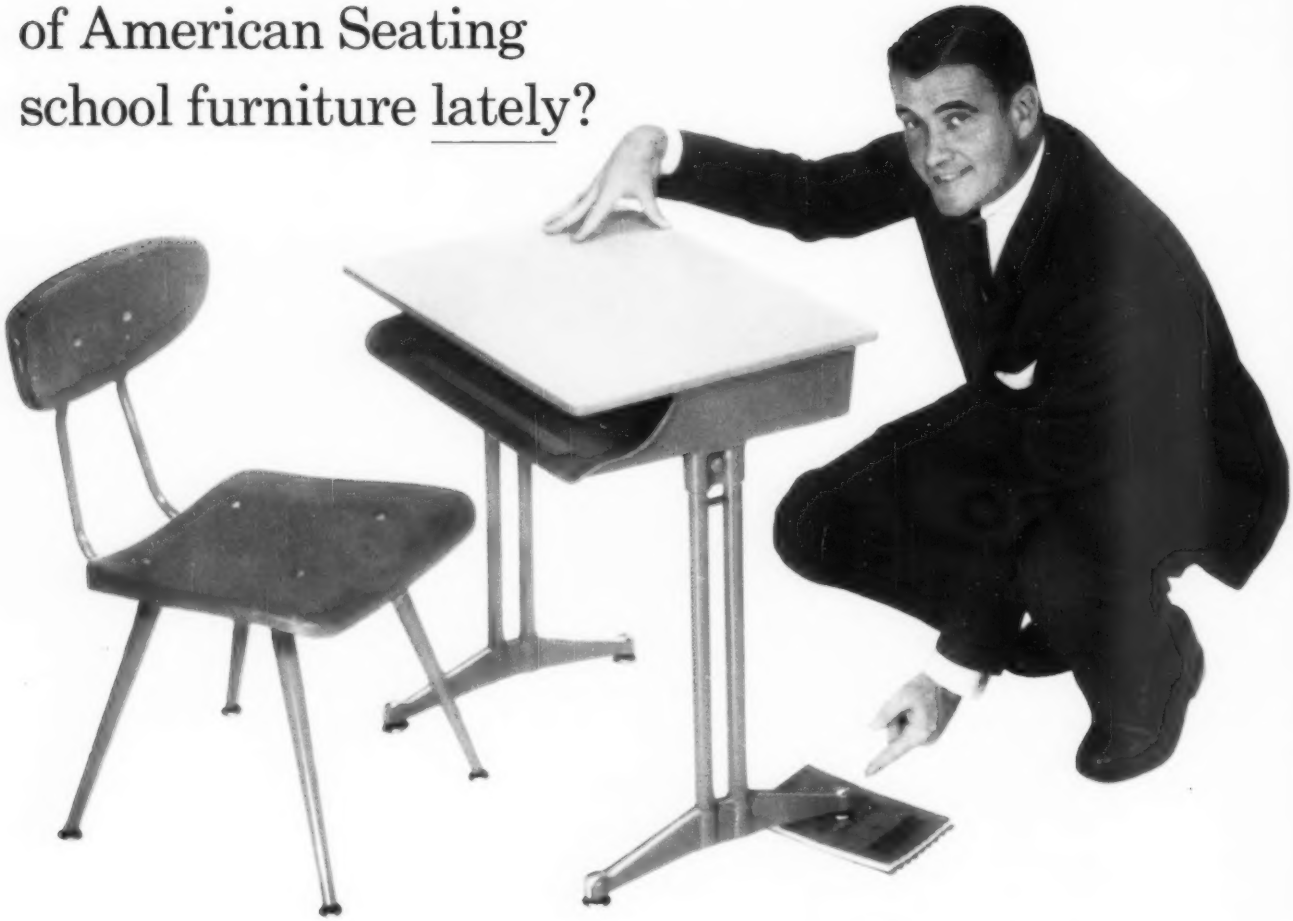

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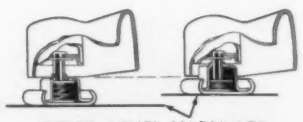

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Kewanee High School

The main entrance of the Kewanee, Ill., senior high school — Raymond A. Orput and Associates, architects, Rockford, Ill. Mr. K. B. Beasley is superintendent at Kewanee.

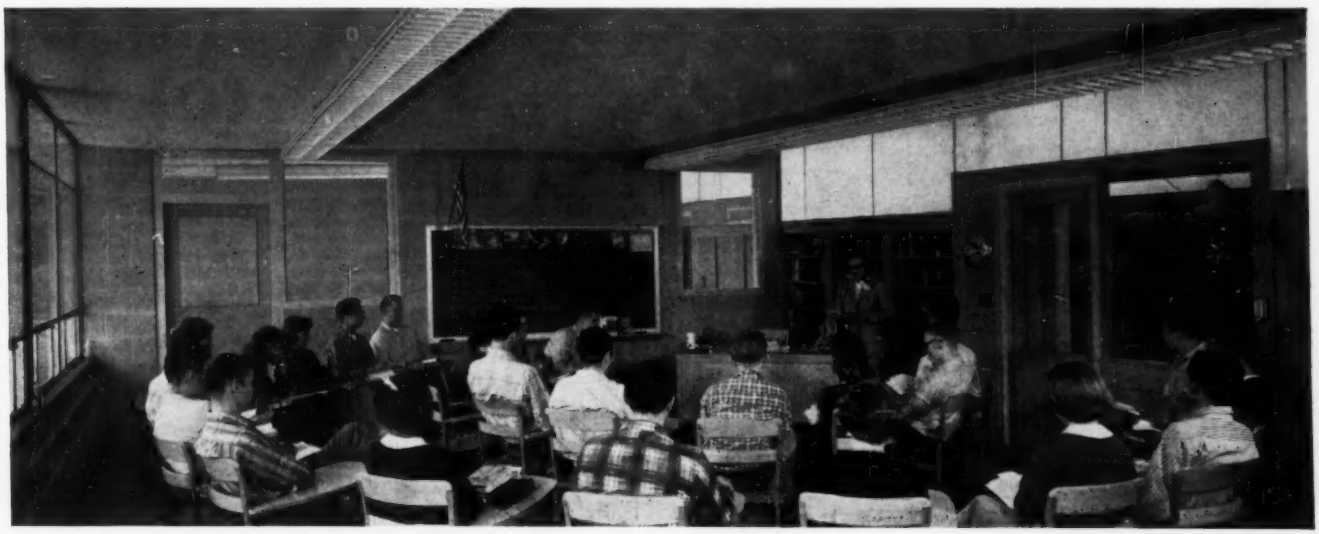
A compact approach to the core curricula, central building high school . . .

The Kewanee, Ill., senior high school features high quality design and materials skillfully contributing to the beauty of the building without increasing the cost of the general construction.

The school contains: 26 academic classrooms and shops; a gymnasium, auditorium, and cafeteria; a library and visual education room; a band room and choral room; and two student publication rooms and a darkroom.

Layout Areas

The Kewanee High School is a first class *educational plant*, not just a "school building." It is a product of



A typical classroom of the 26 contained in the Kewanee high school. The walls of the academic area are painted block, the flooring is asphalt tile, the lighting is fluorescent. The English classroom shown above has publications rooms at both ends for convenience.

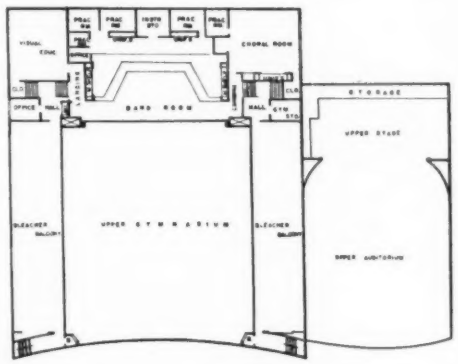
team work produced between a high-caliber school board and administrators on the one hand and experienced architectural planners on the other hand. The latter welcomed the opportunity for a fresh approach in solving the high school building problem. The core curricula and cluster design are skillfully adapted to the central building scheme.

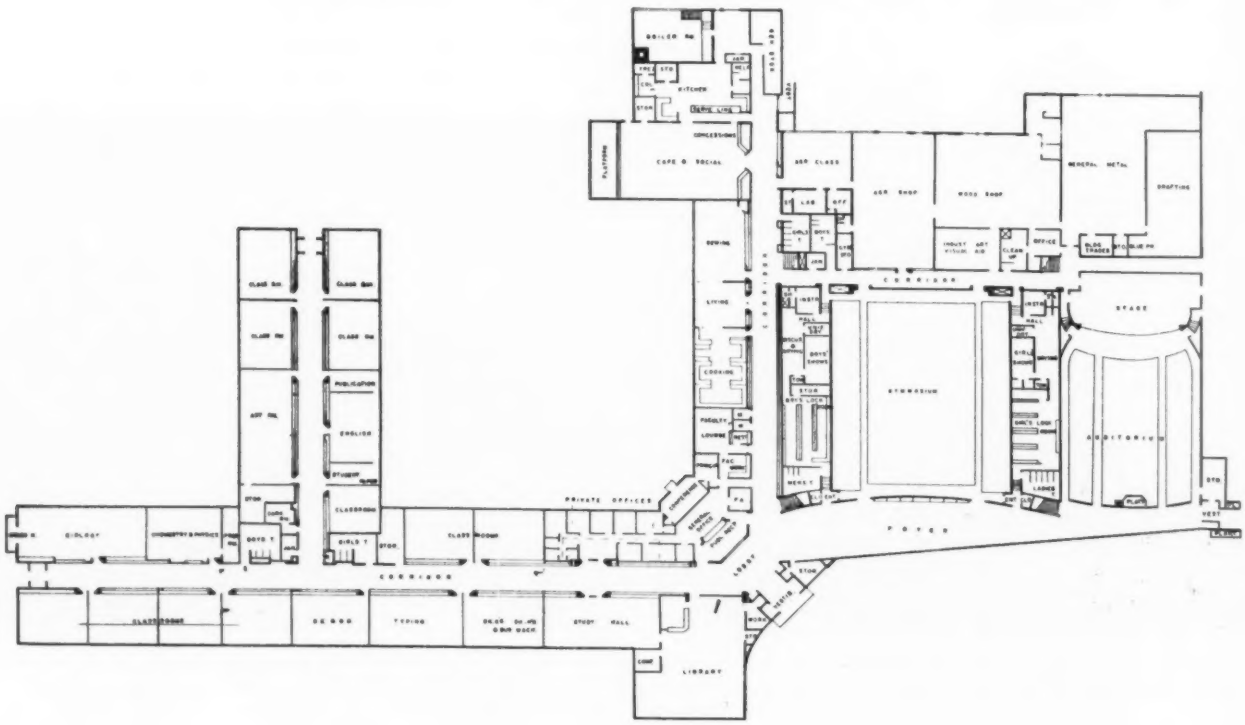
For example, one area consists of dramatic arts, music, vocational, and athletic departments. The music department orients around the stage of the auditorium and gymnasium balcony and has as well accessibility to the athletic field. The industrial-arts department is adjacent to the stage, for stage craft operations; and the office cleanup of the shop area acts jointly as an officials' dressing room for athletic contests.

The second area consists of the utility and food handling rooms. By having the cafeteria located at the end of a long corridor, service lines to the steam tables and concession areas are easy to handle. The corridor student display area of the homemaking department, achieved by store-window-front design on the corridor side looking into the living area, effectively dramatizes the functional nature of this branch of high school education.

The third area comprises the administrative and library-study hall, the central instructional function of the entire school. The main administrative area is skillfully separated from the academic, disciplinary, and health departments common to the over-all function of the executive offices.

The fourth area orients around the perpendicular axis of the academic section of the building. The core curricular activity of the school publications around the English and photography departments ties in with the distributive arts, commercial, and science departments. The social science and mathematical classrooms in this area are all complementary educational activities going on in these sections.

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GIRLS' T.
BOYS' T.
STOR.
CLASS ROOM
CLASSROOM
BIOLOGY
CHEMISTRY & PHYSICS
TYPING
STUDY HALL
LIBRARY
ADD'N
ADD'N
ADD'N

"Hub of the school educational activities" is the bright and attractive library with high-level, low-glare natural and artificial lighting. The room has accommodations for large study groups. A conference room and a work and magazine storage area are included in the layout.

Unusual Features

The visitor inspecting the Kewanee high school will be immediately impressed by certain features of the building. One is the grand foyer of the edifice and the other is the curved walls of the gymnasium and auditorium.

Why were these walls curved and did this feature add to the cost of the building?

It can be stated emphatically that there was no increased cost because of this design feature. Because of the gentle curve of these walls, the cost of laying the brick was no more than a straight wall.

By why curve the walls?

This was done for two reasons. The first reason was acoustical or "sound control." The curved wall adds materially to better acoustical conditions in both the auditorium and gymnasium.

The second reason was to provide ample congregating space for the public for athletic and theater-type functions of the school. In bad weather most of the spectators can be cared for by the ample space of the foyer so that the movement of large crowds in these mass circulation areas is handled with a minimum of discomfort. The advantage of this arrangement will become more apparent to the public the older the building becomes.

The cost of this space was negligible since it is merely an enlarged corridor made interesting by geometrical treatment.

The Cost

The total cost of the school, including equipment and architectual fees, was $1 303,645. For a total area of 104,340 square feet, the complete cost of the structure per square foot was $12.49.

Planned for community use, the Kewanee gymnasium and band room has a large seating capacity and numerous, convenient entrances and exits. At the far end, the band room with folding doors is ideally situated for band festivals and sports events. The room has permanent risers and provides ample storage space for music instruments and private practice rooms.

The arts and crafts room has an abundance of storage shelves along the outside walls, cabinets built into the inside walls, and ample display rails and boards at both ends.

Solving a Special Building Problem

How We Modernized an Older School

What can be done about an ideally located, but educationally obsolete school? Read this detailed account of the materials used and costs involved in a realistic renovation . . .

ROBERT A. NICHOLS, III

Secretary, Lebanon, Pa., School Board

In recent years the "new look" has been a proverbial phrase in the world of fashion. Here in Lebanon, Pa., this phrase can be appropriately applied to the architectural alterations and additions that have produced a "new look" at the old Lindley Murray elementary school.

This building, named for a leading American grammarian who was born in the neighboring Dauphin County in 1745, has served the children in the northwestern sector of the city since its erection in 1870. It is located in the heart of an old established neighborhood where the houses are closely situated. Through the years many little feet have made their way from these houses to the two-storied brick structure. The future reveals that this will not abate in the years to come.

The year 1955 was of historical importance in Lebanon's educational history. In the spring of that year construction of the new Southeast and Southwest elementary schools was completed. These two beautiful, functional buildings graced the crests of two scenic sites in the developing new southeast and southwest areas of the city.

The members of the board of school directors and school administrators wanted to provide modern facilities to all the children in the community. This could only be accomplished over a period of time because of the financial limitations.

Although new construction of school plants is most desirable and the dream of every board member and school administrator, there are times when it is neither practical, economical, or even possible. Older buildings experience a certain amount of deterioration through the years of use and certain features become obsolete and undesirable. The solution to the problem of obsolescence calls for renovations and remodeling of the older structures. If properly planned, such remodeling can become a fascinating and rewarding experience and investment for a board.

Replacement or Modernization

The northwest sector of the city came next on a calendar of planning. The need for a school to replace the older plant in the area was recognized, but there were no sites available for construction — other than the contingency of costly demolition of houses. This situation is generally found in older and established cities. It was then that the board gave consideration to the possibility of renovating and adding to the old structure.

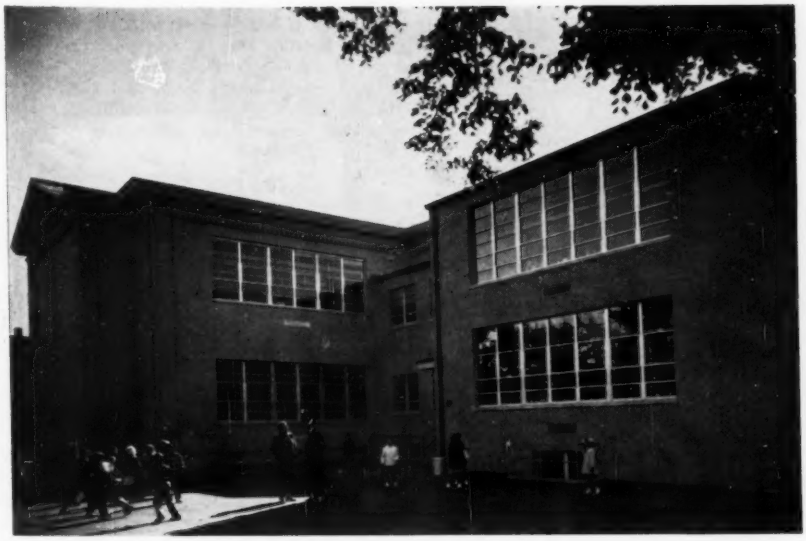
This thinking concerning the Lindley Murray building was conveyed to William Lynch Murray and Associates of Harrisburg, Pa., for a professional opinion. This capable architectural firm, after survey of the building, not only expressed the opinion that the sound old structure would lend itself to renovations and additions, but enthusiastically presented plans that would make it a reality. So early in 1956 the wheels were set in motion; during the ensuing months, drawings and specifications were prepared; a program of financing was formulated; contracts were awarded and bonds sold. Thus, in June, 1956, the contractors were able to begin work on the building. The building was completed on schedule in August, 1957.

During the early stages of the contract the old building was divested of all but the brick walls, classroom floors, and roof. The three windows of each of the four front classrooms facing east and the four rear classrooms facing west were removed as well as the masonry between them. In this new rectangular window wall were fitted projected type aluminum sash with clear glass. All window openings in the north and south walls that furnished light to the rooms and enclosed stair ramps were closed with masonry. Thus, each classroom would be able to receive sufficient unilateral natural illumination as compared to the older bilateral condition that existed.

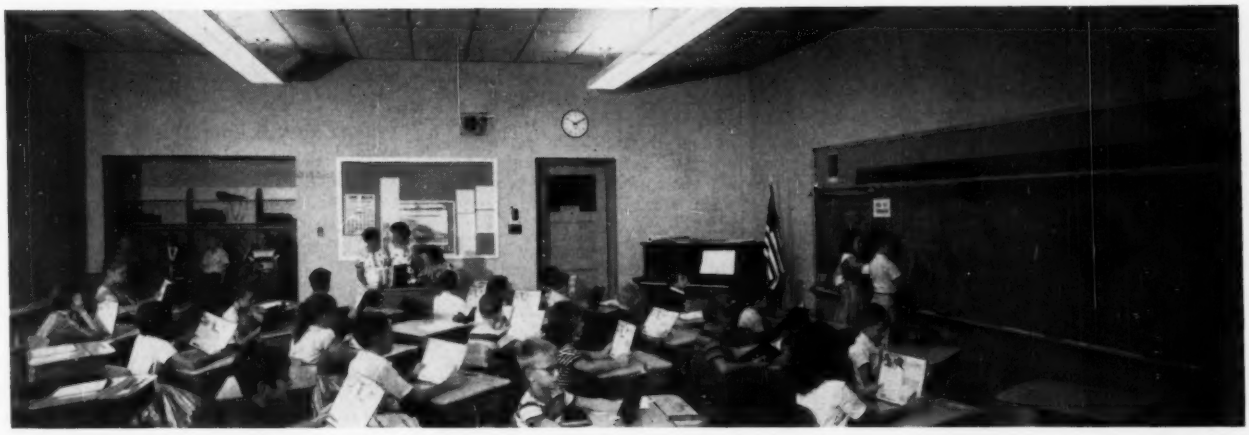
The ceilings were lowered to a position immediately above the window heads. The ceilings, consisting of acoustical panels, were fitted in a structure of metal frames suspended from the old ceiling. This lower ceiling not only improved the acoustical properties of the classrooms but the lighting and heating of each room. The old incandescent fixtures gave way to two rows of incandescent fixtures that extended the length of the rooms parallel to the window wall. The side walls were replastered and painted in attractive pastel shades. Blue-green chalk boards with aluminum trim grace the front of each room. Cork tackboards with similar frames were mounted on the side walls as well as above the chalk boards. The old wooden floors were covered with fiber board, upon which were laid asphalt tiles in rich colors.

Treatment of the Second Floor

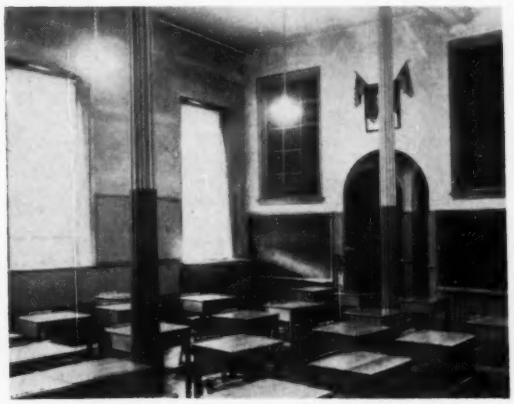
The second floor had been served by an enclosed wooden stair tower on the north and south sides of the building. Since this area had already been enclosed with masonry, an extension was made from each classroom to provide for a work alcove equipped with cabinets, shelves, sink, a formica-covered work counter, and overhead illumination. A teacher's closet was fitted into the same area adjoining the work alcove. This added considerably to the versatility of the modern elementary classrooms.

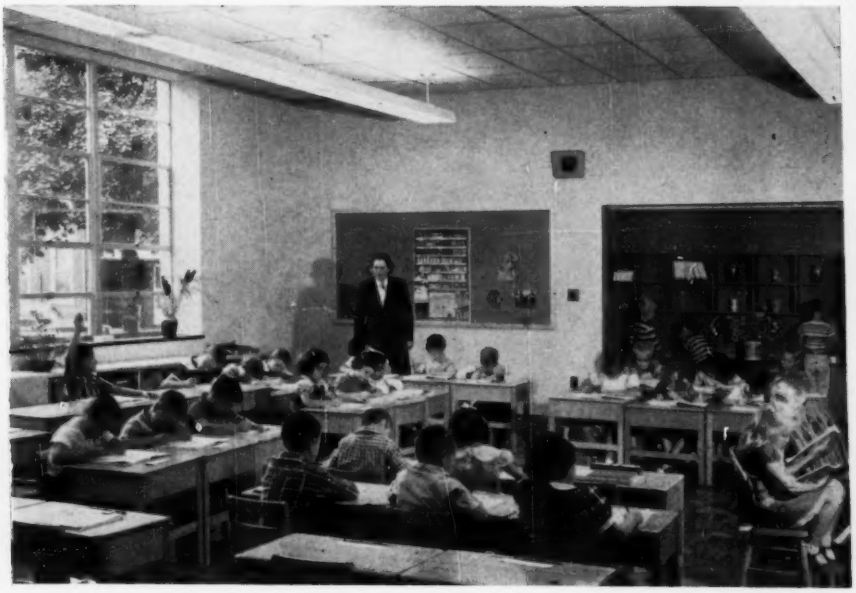


"Before" and "after" views of the rear exterior of the Lindley Murray elementary school, showing at left the addition to the school.



Two typical, modernized classrooms in the renovated Lindley Murray elementary school are shown above and below at right. Directly below is a typical classroom prior to renovation, to which the ceilings were lowered and fluorescent lighting fixtures replaced the single bulb incandescent ones.





The corridor wall of each old classroom had a large cloakroom. This was transformed into a smaller recessed cloakroom off the classroom proper and was equipped with colorful shelves and coat racks for the children's clothing. Leading off to the right and left of this space were located two small lavatories, with floors and walls of ceramic tile, each equipped with a toilet, wash basin, soap and towel dispenser, mirror, overhead light, and a ventilating fan.

In the center of each first floor classroom of the old building were located two unsightly pipe columns. These were removed, and the necessary support was provided by the utilization of properly placed steel beams. The old steam radiators gave way to attractively mounted unit ventilators placed along the window wall, to provide heat and ventilation, as well as efficient functional metal casements for additional book storage space.

The old central corridor with its wooden stairway leading to the second floor rooms was completely removed from the basement to the second floor. Utilizing the front projection of the building, which was formerly a lobby of the first floor and a small teacher's room on the second floor, a fire tower was installed that serves the corridors of all three floors. This fire tower representing the main entrance was lined with buff colored bricks and was constructed with steel fitted with gray stone step slabs. It was separated from the corridors by hollow steel and glass fire doors.

The new corridor floors were poured, reinforced concrete slabs overlaid with bright-hued asphalt tile. Green ceramic tile lined the walls to desirable hand height for ease of maintenance. The remaining portions of the walls were plastered and painted a light yellow. The ceilings were covered with glass panels, into which rectangular recessed incandescent light fixtures were mounted and spaced to provide adequate illumination. All the classroom doors were safely recessed in the corridor walls and were formed from natural oak fitted with an upper glass viewing panel. The fire extinguisher cabinets and light panels were also recessed in the walls. Two drinking fountains were placed in the corridors on the first and the second floors. Those located at the end of each corridor were located in beautiful mosaic tile faced alcoves, adding a decided charm to the entire corridor.

Since all classrooms were equipped with two individual lavatories each, the old lavatories located on the first floor at the end of the wooden corridor were removed. It was from this sector at the rear of the building that the four-room addition was projected. This addition was connected to the old building by a narrower structure which is a continuation of the corridor, bounded on one side by a fire tower extending from the basement to the second floor similar in construction and service to the front fire tower. It also provides an exit on both sides to the outside play area. On the other side, this corridor is bounded by a health room in the basement, an office on the first floor, and a teachers' room on the second floor.

The New Wing

The classrooms in the new wing were comparable in all features to those in the old wing, except they had north or south exposure. The entire basement area beneath the new wing provided a welcomed auditorium and recreation room. It is well illuminated on three sides by the windows that face the play area and open-light wells. These windows, as well as all the windows on the first floor facing the play area have been fitted with shatter-proof glass. Aside from the corridor entrance to this room, there is an exit directly to the fire tower and to the center of the building and an exit to a ramp leading to the play area in the rear of the building. The floor has been covered with asphalt tile; the walls are painted concrete; and the ceiling is covered with white striated acoustical tile with recessed incandescent light fixtures. A kitchen unit containing an electric stove, refrigerator, and sink has been installed at one end of the room behind two large folding dutch doors. A large screen has been suspended from the wall for the projection of films and slides. A small raised platform can be moved in place for assembly programs and plays in the room accommodating 250 folding chairs.

Two lavatories to service the basement region are located at the end of the corridor. A large room in the basement is provided as an instrumental music practice room. The old building was remembered for its cavern-like space beneath all the classrooms, these rooms have now been finished with concrete floors to provide storage space.

The two old coal-fired cast iron boilers which were just getting by during the previous several heating seasons, have been replaced by one large oil-fired steel boiler. The ten-thousand-gallon oil storage tank is located outside of the building beneath the play area.

The health room in the basement has been equipped with several large closets, a basin in the room, and an adjoining lavatory. The office above it is equipped with several closets and a counter window opening out into the corridor. The controls for a central public-address system, connecting all the rooms, is installed in this office and is valuable for announcements, emergency calls, or broadcast programs and music.

The addition to the building has been faced with brick masonry on a foundation of reinforced concrete. The brick is a warm gray finish brick surface prepared in the kiln. The familar red brick of the old building has been painted with several applications of a preparation, which, not only has brought the surface in color harmony with the new gray bricks, but serves to waterproof the walls as well.

The old front porch was removed completely. In its stead a small overhanging shelter roof has been provided at the main entrance with a concrete sidewalk with a slight incline to the lower sidewalk level led away from it. The front windows above the roof have been replaced with glass block for design and to furnish light to the inside fire tower.

The old tin roof has been replaced with a new roof. Besides this, a new surface has been laid on the entire play area. A new concrete sidewalk has been laid the length of the street north of the building in place of the former brick sidewalk.

The Costs

The renovations and additions to the Lindley Murray elementary building were accomplished for a total expenditure of $301,403. Distributed as follows:

General Contract	$202,800
Plumbing Contract	19,600
Heating & Ventilating Contract	36,000
Electrical Contract	21,800
Extras	2,705
Rock Excavation	1,438
Architectural Fees	17,060
	$301,403

The architect has estimated that to duplicate this school in accordance with state requirements today, the building would have cost approximately $450,000. This in itself represents a saving of approximately $150,000. If a new location had been selected, there would have been the added cost of a new site which, as stated previously, would require costly condemnation and demolition. Larger tracts on the outskirts of the city would require transportation for the children of the area.

Financing the School

The construction was financed with the receipts of the sale of $350,000 general obligation bonds in late May of 1956. The issue runs ten years and was sold at an enviable low rate of 2¼ per cent. This low rate of interest was attributed to the kind and term of the bonds, the low bonded indebtedness of the district, and its sound financial standing. The balance of the receipts of the bond issue have been used for the renovation of the gymnasium and auditorium at the Henry Houck junior high school.

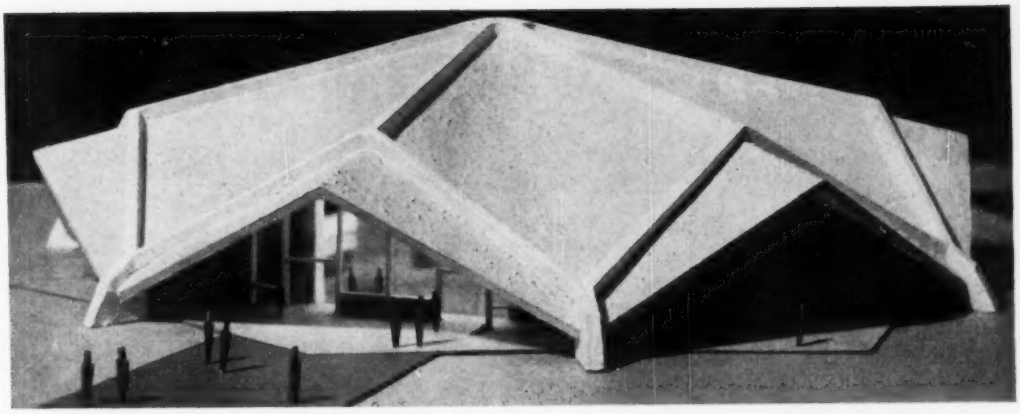
During the course of construction, the frugal management of the funds enabled the district to realize an additional $5,352 in interest from investments of the diminishing balances in U. S. Treasury Bills while meeting monthly construction bills during the 14-month period.

The project is on the schedule of state subsidized building projects, and an estimated 20 per cent is expected in reimbursement to the district.

The addition of the four classrooms to the Lindley Murray school has enabled the board to close the Higbee elementary building, located three and a half blocks away. Since small buildings are not as economical to operate as larger buildings, a saving is realized in this action.

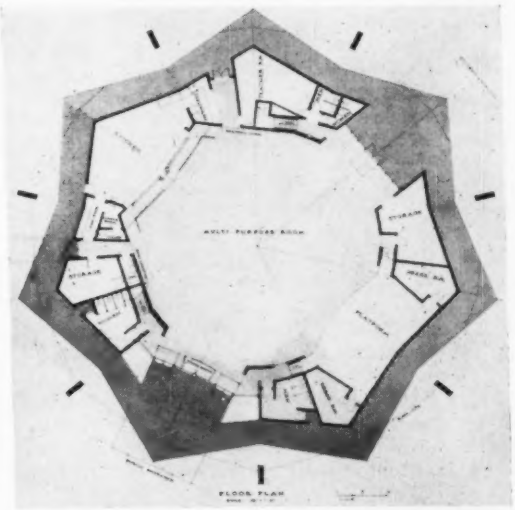
Lebanonians are justly proud of the wise decisions that have resulted in the additional improvement to the educational facilities of the city of Lebanon for these observable tax-dollar values. And not to be minimized is the nostalgic attachment to Lindley Murray by many Lebanonians. This, too, has been preserved as "Old Lindy" continues to serve the boys and girls of the community.

SCHOOL LUNCH TRENDS

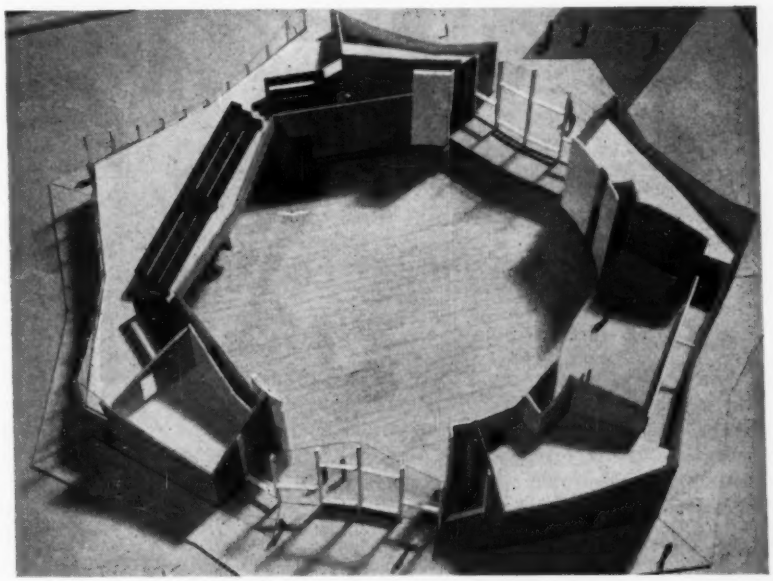


Exterior of a model of the new Mercer Island, Wash., cafeteria-auditorium — Bassetti & Morse, architects, Seattle, Wash. Dr. Robert S. Studebaker is superintendent at Mercer Island.

An Imaginative Approach to the Cafetorium



A floor plan (right) and model without roof (below) of the Mercer Island cafetorium, illustrating the arrangement of auxiliary kitchen, storage and dressing rooms, and stage around the circular multi-purpose room.



The cafeteria-assembly building for the Mercer Island, Washington, high school houses the high school cafeteria and also serves as a school and community assembly room with a small stage and nearby dressing and storage rooms. For assembly purposes, the main floor will seat some 500 people, and a balcony over the kitchen will accommodate an additional 200 people.

The building will be placed in a landscaped court between gymnasium, library, and music buildings, with public entrances off the main drive to the south and a second entrance for students from the direction of the library and music building.

Construction started in late February of this year. The structure of the roof will be poured-in-place thin-shell concrete with supporting concrete ribs on the upper side. The whole structure will rest on seven small buttresses around the outside. Such a structure is fireproof and earthquake resistant and compares very favorably in cost with other less permanent types of construction. Walls will be of lightweight block in stack bond; the floor will be tile on concrete slab; the exposed underside of the dome will be sprayed with acoustical treatment of asbestos fiber. During lunch the students will have a view of the outdoors through the large, full-height glass panels at the two entrances.

It is expected that with an imaginative use of lighting and color this building will be the focus for group activities of the school and a useful community hall. The estimated construction cost is $140,000.

Practical clues on—

What the Adminstration Can Do

"The Administration" here refers to the board of education and their executive personnel responsible for a school building program. While undoubtedly many of the following 28 suggestions — presented in order of their *proved* value to economical school construction — are utilized in school plant projects presently, others may provide a means for extending the value of the school building dollar. Certainly any citizen has the right to charge that not everything is being done to reduce school building costs unless most of them are used!

1. *Be sure that competitive bids are taken on all building projects.* Although the laws of most states require this, often the spirit of the law, if not the letter, is broken. In some cases, interested bidders do not learn of the project or learn too late to prepare a bid. In other cases, an architect is known to have a "favorite" builder, so other contractors either do not bid or submit only a token bid. Yet, according to those who have built "low cost" schools, this is the most important of 267 suggestions for getting proper value for the construction dollar!

2. *Make sure there are several bidders on each project.* Everything said in regard to ¶1 applies here also. The number of bidders often can be increased by the simple expedient of waiting a few weeks or months to take bids rather than to do it at the contractors' peak season. Boards are often so desperate to get facilities completed that they pay a premium price rather than delay. The period of delay seems insignificant, though, when compared to the 50 years or so the building will stand. Another help is to make sure that the bidding has been called to the attention of contractors, because some might have missed seeing the printed legal notice.

3. *Allow bidders at least one full month to prepare their proposals.* Again, most state laws prescribe the time during which a project must be advertised. If the law requires less than one month, school people should work to have it changed. If the law requires one month or longer, all concerned should comply with the spirit of it. Boards sometimes attempt to hurry the architect by advertising for bids before he has drawings completed and reproduced ready for distribution. This cuts down on the bidder's preparation time, and he is likely to "pad" his bid to take care of items which he might have overlooked because of having insufficient time.

4. *Have the architect's contract clear and definite in regard to services to be performed and fees to be paid.* Many misunderstandings arise because of obscure or ambiguous provisions of the architect's contract. Some can be obviated by use of the contract form of the American Institute of Architects (A.I.A.), with modifications as necessary. If the architect agrees to provide *inspection* as well as *supervision* (although he should not be expected to do so), his contract should say as much. Fees on equipment are often a point of contention. While it is generally agreed that a higher rate of fee on equipment items is justifiable because the drafting time is disproportionate to the cost of the equipment, this is often misunderstood, and the contract may not have been clear as to the rate of fee or the kinds and quantities of equipment to be specified. Be certain you pay for all the service you get, but also be certain you get all you pay for — and that you do not pay for any you don't need.

5. *Give careful attention to ascertaining that contractors are competent before awarding contracts.* When a new school building is half constructed is a poor time to learn that a contractor can't meet his payroll or that his credit is so poor that materials suppliers do not trust him. Usually, the architect will have reliable knowledge about contractors in the area or can help in checking with boards of education or companies for whom the contractors have worked. If investigation turns up

Sources of School Building Economy

BOARDS of education and administrators of local school districts, desperately trying to obtain maximum mileage from all school building funds, hope that someone, somewhere, will find a revolutionary new building material or construction method that will make possible the construction of satisfactory new schools for a fraction of what they have been costing.

Until this idyllic panacea bursts upon the school construction scene, the practical answer to the problem of school costs seems to lie in the stringent application of as many successful economy suggestions as possible to each new school plant program. By avoiding unnecessary expenditures, significant, cumulative savings can be achieved.

Dr. Boles' **Sources of School Building Economy** provides an exhaustive list of proved means by which boards of education, administrators, architects, citizens' councils, etc., can co-operate to effect sound and attractive construction without waste of precious funds and — of primary importance — without loss of educational effectiveness.

To compile this basic inventory, the writer established a comprehensive list of economy suggestions from all available media — magazines, pamphlets, books, etc. Similar items were combined and each remaining suggestion was then worded as a positive statement. A jury of 50 experts in school construction then validated these criteria for true economy — an economy that, in addition to helping lower initial school

To Reduce School Building Costs

HAROLD W. BOLES
Educational Consultant, Newark, Ohio

information that should disqualify a contractor, don't hesitate to reject his bid. You will not be saving money over the next bid if your contractor "cuts corners" — or if he has to be replaced in the middle of a job. The law usually requires acceptance of "the lowest and *best* bid" — and courts generally are inclined to protect the public interest.

6. *Select your architect through careful screening of several architects.* Citizens would, in many instances, be appalled at the scant attention given to selecting the architect who will play a major role in the spending of hundreds of thousands — or even millions — of their tax dollars. Some boards seem to believe naively that all architects are equally competent. Of 48 situations recently reviewed in which architects had been employed, there were only *nine* in which the employing board *had checked with other boards for whom the architect had worked and had gone to visit buildings!* More of the 48 had been employed because of "local residence" than for any other reason. Next most popular reason for employment was that "this architect had done work in this district previously." Reasons ranged downward to "he was the first to apply," and, in one situation, an architect got his name inserted in the board of education minute book through outright chicanery, and the board members, though chagrined at being duped, lacked the courage to tell him they didn't want him! In several places an architect was employed "because he had a good sales talk." One wonders whether citizens in all of the 48 districts will get full value for the fees paid the architect.

A really practical guide by means of which a board of education can screen a number of architects and objectively record pertinent facts regarding each, to help determine which is most likely to do the best job in a given situation, is Klager's "How to Select an Architect," which appeared on pp. 43–44 of the April, 1958, SCHOOL BOARD JOURNAL. Too often, neither the superintendent nor the members of the board have any conception of what they want the architect to do or of what qualities are important.

7. *Be certain the administration is properly organized for dealing with building matters.* Perhaps this advice seems unnecessary. It is necessary, though, that board members realize that in a building program, even more than in the conduct of other official business, they must function as a team. They need to know and differentiate the functions of the board, the superintendent, the educational consultant, the staff, the public, the bond attorneys, the architect, the contractor, and all others concerned with or involved in the building program. They need a chronology of events, with the estimated minimum time required for each phase of the work. Above all, they need to realize that proper timing of the building program phases can save their constituents thousands of dollars.

8. *Thoroughly familiarize all members of the board of education with building problems and procedures.* Again, the advice may seem superfluous, and it is not intended as admonishment to superintendents. However, there are some *superintendents* who do not recognize the need for long-range planning, for educational specifications, for being conversant with financing procedures, etc.

9. *Select an architect with a modern concept of school design which considers function and utility.* Architectural anachronisms are still being built. Some "old line" architectural firms are still designing as they did 30 or 40—or 50—years ago, with only minor and superficial changes. Some have designed a hundred school buildings, and others have designed one school a hundred times. Our fast-moving society demands the very best and very latest thinking from both educators and architects if new school buildings are to serve their purpose at all satisfactorily for any

construction costs, must *not* (1) increase maintenance or operating cost, (2) reduce functional efficiency of the school, (3) cause safety or sanitation hazards, (4) increase insurance rates unduly. (5) decrease life expectancy of the school plant unduly, (6) limit future expansibility, or (7) make the school building unattractive.

The list was reviewed and those items not measuring up to the above criteria for true economy were eliminated.

Finally, the suggestions which qualified (267 in number) were listed in a questionnaire and submitted *for rating of usefulness* to the administrator and architect of each district which the various state departments of education recommended as having constructed recently a school at "lower than average costs." Returned questionnaires from 86 schools in 34 states were then analyzed and tabulated.

The suggestions for avoiding unnecessary expenditures, in this article and those which follow, therefore, have *actually been proved*. The suggestions are listed in what the respondents believed was an order of importance in contribution to economy in constructing their recognized well-planned, well-designed, and well-built schools!

The accompanying article, first in a series, considers suggestions that the administration can use to economize in school construction. In following issues of the JOURNAL, suggestions will be presented in the areas of:

2. Proper Educational Planning Can Help Reduce School Plant Costs
3. The Right Architect Can Save You Money
4. How To Save Money on Sites and Site Development
5. Equipment Is Important to Economy
6. Some Construction Methods Cost Less Than Others
7. Materials Used Can Vary Costs
8. Insist on Economical Engineering, Too

(When the series is concluded, reprints of all the articles will be made available to you at minimum cost for study or reference.)

appreciable number of years. Some buildings being constructed today were educationally obsolete three decades ago. Far too many structures, even now, are conceived in architecture first and a program is then adapted to fit. This is criminal waste of money.

10. *Select an architect who is known to be cost conscious.* Not all are so known. Some refuse to reveal cost data or to use any of the accepted techniques for reducing construction costs. Some persist in using cupolas, columns, belt courses, window ledges, etc., which serve no useful purpose — but which cost money.

11. *Finance the building with wisdom and forethought, so that emergency measures need not be utilized.* This is vital. Any district in which new buildings receive no consideration until enrollments make them an emergency need is likely to have only a makeshift educational program. When buildings have to be financed on an emergency basis, taxpayers often pay a premium for the financing.

12. *Hold legal fees to a minimum.* In many cases the city solicitor or the county prosecuting attorney is designated by law as the legal counsel (usually without fee) for the board of education. Nearly always a firm of bond attorneys must give an approving opinion prior to the sale of school bonds and will, for little or no additional fee, carry out all phases of legal work necessary to the financing program. Hundreds of districts each year pay fees for legal counsel which they could have obtained at no cost or no additional cost from one of these two sources.

13. *Plan any building project only as part of a long-range plan.* A long-range plan is imperative if a hodge-podge of buildings is to be avoided. Make a plan for *all* building and plant improvement in your district for at least ten years. When circumstances force you to deviate (as they will), revise the whole plan and extend it for ten years from that date. There are inadequate buildings all over the United States which are mute monuments to "today's problems." If your school plant, like Topsy, "just growed," chances are your educational program did, too, and that neither is worth much.

14. *Leave all technical decisions to your architect.* That is what he is being paid for, and even if you *did* get a poor one (which no board ever admits publicly but many may believe privately), he probably knows more about building than you do. Make him explain his design and product suggestions, but don't tell him what brick to use, what make of boiler to specify, etc. He studied those things, and in most states he will have passed a state registration examination in addition.

15. *Exert every effort to make the bond issue attractive to potential buyers.* Supply all the information you can, and do it graciously and promptly. Don't feel that the bond attorneys are trying to pry when they ask for financial data. Remember, you will pay a lower interest rate if bond buyers are convinced that the district is in excellent financial condition.

If you don't prove the district is in good condition, buyers will assume you don't do so because you *can't.*

16. *Don't saddle the architect with preconceived ideas about plan and materials.* Don't tell him "We want a school just exactly like they have over at Modernville." You are paying for the architect's creativeness and ingenuity, even more than his specialized knowledge. Let him use them. Besides, he probably has found some ways he can improve on the Modernville job — even if *he* designed it only a few months ago! If you don't want creativeness, hire a draftsman. It's cheaper.

17. *Manage the sale of bonds carefully.* It is costly and wasteful to pay interest on borrowed funds while the principal is not being used.

18. *Make certain the architect is paid only the going rate of fee for the area.* Not all the shysters practice law. Every profession has its quota, including architecture. There are always a few whose concept of a fair fee is "all the traffic will bear." Don't look for a cut rate either. You often can find it, but it is usually no bargain.

19. *Don't try to force completion time of a building project.* It only costs you money. Say you direct that a building be finished in 12 months and the contractors think it will take 15 months. You try to force completion by stipulating that there will be a penalty or "liquidated damages" of $100 per working day for all time beyond the 12 months. Your low bidder computes his bid and then adds $6,600 (3 months × 22 working days × $100). In addition, you would have great difficulty collecting on such a provision in most states.

20. *Seek bids at an advantageous time of year.* Opinions seem to vary considerably on what that time of year is, and *every month of the year was thought advantageous by someone* in the study from which these suggestions were taken. However, in this study the months most favored and the number of persons favoring them were: March, 7; December, 7; February, 5; June, 5; September, 5.

21. *Select the architect on the basis of competence and disregard where he lives or whom he knows.* The fact that "he's a local boy" won't make your critics less vocal if the building is substandard. Only if two architects are *exactly equal in all other respects* should you give advantage to one who lives in your town — or belongs to your lodge.

22. *Try to get building codes liberalized to allow greater freedom in design.* Many codes are more antiquated than the Model T — and were written about the time that mechanical marvel was designed. Some allow only completely fireproof construction, even in today's one-story schools. Some codes require "fireproofing" of steel even in one story structures and some require plastering of all walls and ceilings. The only beneficiary of these provisions is the plasterer's union.

23. *Don't invoke a penalty or "liquidated damages" clause against contractors.* If you do, you will likely have to prove that it actually cost the board of education the sum you propose to withhold from the contractor. It is often hard to prove, and sometimes it's impossible.

24. *Employ the architect on a fixed fee* — that is, a percentage of the *budgeted* amount rather than of the actual contract sum — so the architect employed will not be tempted to spend more to make more. By this method, you also avoid penalizing, financially, an architect who saves you money by bringing in bids below the budget.

25. *If more than one building project is being planned, take bids on all the buildings at the same time.* What is a week, a month, a few months, or even a year compared to the 40 or 50 years a building will probably stand? It may save real money if you bid projects so a contractor moves equipment in and out of town only once and if he can shift workers from one job to another at will.

26. *Make certain that provisions exist for revising building codes at least every five years* — and that the codes *are* revised frequently in view of new construction techniques and materials developments. You may have to lobby more than a little in your state legislature to accomplish this — and you will have powerful opposition. Established trades like to keep new trades out, and ditto for materials manufacturers and distributors.

27. *Finance buildings if at all possible on a pay-as-you-go basis or on short term bonds* (no longer than ten years). You pay about $115,550 interest at 3½ per cent on a $600,000 bond issue retired in ten years, but the same issue costs $168,000 in interest charges if retired in 15 years at the same rate, or $220,500 if retired in 20 years. On the 25-year retirement plan which is so popular in many states, the interest cost on a $600,000 bond issue at 3½ per cent is $273,000. The only persons for whom the longer period is a bargain are those who won't be there after ten years. By using the shorter terms you also regain bonding capacity more quickly so as to be prepared for future building needs — and no one foresees the end of such needs for most communities.

28. *Let building contracts on a "cost plus" basis?* The very few persons who advocated this measure indicates that such a procedure is no substitute for true competitive bidding. Apparently, however, there are some instances where it *can* result in a saving.

Developing Progressive Maintenance

A. RICHARD KING
Administrative Assistant, Edmonds, Wash., School District No. 15

The board of Directors of Edmonds School District No. 15, Edmonds, Wash., recently awarded the custodians of the district an across-the-board raise of $100 with an additional $200 to the night waxing crew. This raise represents a substantial portion of the savings expected from the new waxing program and will bring maximum salaries for regular custodians to $4,140, which is nearly up to the $4,200 needed for maximum social security benefits. Both the waxing program and the raise are typical results of the near-ideal working relationships which exist between the administration and the custodians of the district.

In the past ten years, Edmonds School District 15 has grown from three elementary and one high school to nine elementary schools in operation, two in construction and two in planning stages, two operating junior high schools and a third being planned, and a new senior high school with a second planned. The custodial staff has doubled in the past five years. Such growth and its attendant problems has required enlightened administrative policy and a high caliber of employee. Both are evident throughout the district.

A Novel Program

The "waxing program" grew out of a suggestion from a night custodian. It was simplicity in itself. Form a regular crew to circulate on schedule among the buildings and do all the waxing of floors. This reduces the load on the other custodians to the point where one man could be removed from the staff of some new schools. (Actually, where the district had expected to hire ten additional men this year, only seven were needed, resulting in direct saving of three salaries.) The results expected are more consistent and uniform maintenance of floors, lower wax bills, and greater efficiency of regular custodians because of removal of an onerous and time-consuming task.

Naturally, there was some resistance to reduction of the usual custodial staff in each school. This was discussed thoroughly at the regular monthly meetings of the custodians until it was decided that the advantages inherent in the plan made it worth trying, especially when part of the savings were to be used directly as salary raises. So the program was put into effect on a year's trial. It will be evaluated continually as the year passes and will be either adopted permanently with modifications or discarded at the end of the year.

The essence of the administrative-custodial relationship in Edmonds district which makes such group planning and achievement possible lies in recognition of individual worth and a complete flexibility of procedures dependent upon a continuing study-experiment program. All head custodians participate in regular monthly meetings at which everything from disinfectant to discipline is considered. No ideas are rejected without discussion. Meetings are presided over by Building and Maintenance Supervisor John Kochrian who says, "I never have to *tell* anybody anything. A question comes up; it gets beat around the meeting, and the solution comes out . . . just like that! If it doesn't work it comes up again and the same process repeats itself until it gets ironed out. These men know what they're doing better than I do." John Kochrian is first of all a certificated and experienced teacher who continually emphasizes the fact that the schools exist solely for the purpose of educating children. All activities and individuals concerned with school operation must be geared toward promoting the teacher-pupil relationship.

The monthly conferences of head custodians, begun two years ago by Mr. Kochrian, are an important factor in the smooth operation of custodial services. Not only is communication improved and the continual evaluation of all phases of the program made possible, but the status level of custodians is raised. They meet in the same manner as any professional group in the district; there is a real importance attached to the meetings; results of the meetings are positive and apparent. These meetings promote the custodians' interest in their work and feeling of belonging in the district.

Typical Custodians

Individuals are, of course, the secret to any successful operation. What sort of individuals are sought and employed to produce such high caliber of performance as Edmonds enjoys? Mr. Kochrian summed up the typical employee as the ideal he looks for in offering employment. "First of all, they are, or have been, skilled in a trade or craft. They have worked in various jobs connected with defense or construction or maintenance and they could still be working in such jobs if they wished. They are property owners, residents of the district, and have come to realize that there is more to living than chasing around after a few extra dollars. Custodial salaries aren't

(Concluded on page 65)

Shown with two maintenance men inspecting an air compressor at the Edmonds, Wash., high school is the district supervisor, Mr. John Kochrian.

THE AMERICAN
School Board Journal
An Independent Periodical of School Administration
William C. Bruce, *Editor*

PUBLIC RELATIONS vs. PUBLICITY

WE SAW it ourselves, or we would not believe it: a scrapbook, one of a continuing series, filled with newspaper clippings gathered together by the public relations director of a good-sized school system and representing his labors in its behalf. Now let's turn the pages and see what one school system advertises itself as doing to merit community support.

Goodness — it seems that most of the activity is the superintendent's, and that not all of it is school related. Here he is ducking for apples at the Daughters of Kriemhild ball. And standing on his head to advertise National Hat Week. And wearing a bit and nose bag to preach the gospel of humaneness. And marching in the "Don't-Buy-Another-Depression" parade. And here are the records of his many speeches — especially that classic on the "Wit and Humor of the Backwoods from 1837 to 1859." And the calendar of his leavings and returnings. And his utterances on every conceivable subject. One can almost hear the citizenry say gratefully each morning and evening as they open their papers, "O busy, talented, myriad-minded man, how fortunate that we have you to lead our schools."

Of course there are other items clipped and pasted in the scrapbook. There is the account of how the children of the Fanny Fern school had a nature picnic and fell into the creek. And the cute story of why every Friday p.m. all grades above the third of the Aaron Burr school spend two hours roller skating at the Moonlight rink. And the project at the Happy Hollow school of promoting international understanding by an exchange of letters with the Igorotes. (Unfortunately the flow of epistolary traffic thus far has been wholly east to west, but that's easily explained by the likely lack of pencils at the other end.) And so, as the familiar line from the musical show goes, et cetera, et cetera.

Then there is something about individual children. Items dealing with broken bones, with hair dyed green, with lengthy vacations taken with parents in exotic places during periods in which school is in session, with pranks, escapades, and witty sayings, with the kindergarten child who has two hearts.

And so by exemplary industry and a promoter's activities, one public school system is being interpreted to its community. We can well imagine the solid foundations of good will through accurate understanding upon which the strong walls of moral and financial support are being reared. How when the money runs low the burghers will hurry to open the tax sluices to pour in additional golden floods, saying one to another, "We've got good schools. They're teaching the kids the 3 R's and other important things. They're making good citizens of them. They really get down to the important part of their business." In the terse and eloquent Coolidgean phrase, — "Oh yeah?"

Somehow it seems hard for us to get out of our heads the idea that not all publicity is good public relations. Many years ago an automobile manufacturer is reported to have remarked, "I don't care what they say about me and my car as long as they keep on talking about us." It would seem, though, that even for the person, period, and product, this was oversimplification, and that as customers grow more discriminating, tub-thumping, which brings yokels to the medicine show trestle and sells nostrums, is not the best publicity routine for marketing automobiles or for marshaling strong support for public education among an ever more intelligent, more critical clientele.

Public relations would do well to keep constantly in mind the Scriptural wisdom: "When the blind lead the blind they shall both fall into the pit." And presumably, when the blind attempt to lead the seeing, the seeing will stop far short of the brink, and the blind will fall in alone.

The great, essential jobs of public schools are not to be found in the day-to-day biographies of administrators, nor in "cute" stories, nor in sensational chitchat, nor in the record of the exceptional and spectacular. Obviously there is more to good public relations than publicity, and fortunately most school people have the sense to see the point.

— *William M. Lamers.*

SCHOOL BOARDS COMMENDED

IN ITS three sectional conventions for 1958 the American Association of School Administrators adopted resolutions expressing its appreciation of the close working relationship which has been developed in recent years with the National School Boards Association. The superintendents also adopted the following statement of appreciation of the work of lay school boards:

"The Association recognizes the tremendous contribution which lay board members have made to the growth and progress of the American public school throughout its history. Through membership on local school boards, citizens have retained control and policy determination of this vital phase of American life close to the people who are most concerned. We commend board members throughout the nation for their high type of public service and the quality of their educational leadership. We further commend the wise school board members who have continued to differentiate between policy and administrative responsibilities. As administrators, we would encourage all boards to consider carefully their responsibilities, differentiating them from those of the superintendent of schools who should truly be considered the chief administrative officer."

IN THE RIGHT DIRECTION

NOW that we're leading Russia in the satellite olympics, 3 to 2, and all's right with the world once again, the smoke produced by the spurt of charges and countercharges concerning the plus and minus of American education is settling and we see that the school scene has remained substantially unaltered. School bond issues are still having difficulty being approved; there are still double sessions in our schools with the future threatening more; capable and enthusiastic teachers are still leaving the classrooms for fields that promise monetary compensation equal to their talent and effort.

If these hysteric bursts of concern for our country's schools, however, have accomplished nothing more than cause school boards and their administrative staffs to scrutinize the curriculum in the light of the demands of a technological age, and, more importantly, the demands of every individual student, a healthy improvement over educational programming derived from the gossamer ramblings of omniscient "educational theorists" has been achieved.

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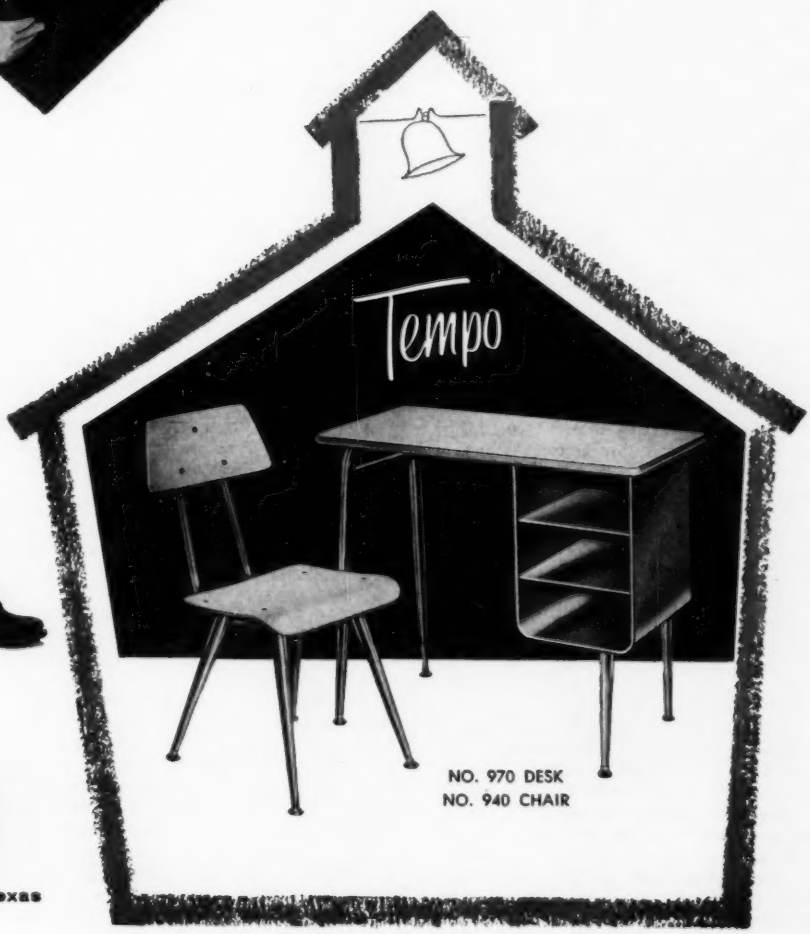

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Who should deliver—

The Commencement Address

—and what should he say?

RALPH N. SCHMIDT

Chairman, Department of Speech
Utica College of Syracuse University, Utica, N. Y.

Do you remember last June's commencement speaker? You probably do. Do you remember what he said, the message which he left with his hearers? You probably don't. Do the graduates of 1957 remember him and his message? Probably not. *Why not?*

It is my belief that the majority of commencement speakers are poorly chosen and that the speeches which they present are too often inept, inappropriate, and far from memorable — if not actually incomprehensible.

What is commencement? Not only is it the time at which diplomas or degrees are granted, it is the occasion on which parents, friends, *and* the community (as well as faculty, administration, and school board) publicly congratulate the young people who have successfully met the requirements for graduation and share with them in their natural elation.

Why then, if the purpose of commencement is to honor the graduates, and if it is for them that the entire occasion is designed — why then are they ignored by those choosing the speaker and by the speaker in choosing his message? Can it be because the speaker is chosen for reasons other than those implied in the occasion? Can it be because his message is aimed at accomplishing something other than is demanded by the occasion?

Who *actually* chooses the commencement speaker for your school? The high school principal? The superintendent of schools? The senior class adviser? The president of the school board? A committee of the faculty? A committee of the school board? The graduates-to-be themselves? There may be a direct correlation between the kind of commencement speech and the selecting agent!

Too often the speaker is selected because he holds a position of prominence, or because he is a friend of the selecting official, or because he is a professor at some college or university where the selecting official went to school — or because he is on the "right side" of a question which the selecting official would like to have impressed on the community, or — or — or . . . The number of reasons which have nothing at all to do with the purpose of commencement is legion!

Most of the reasons given above are not the reasons for selection when the graduates-to-be have the deciding power. They have no "axes to grind," no favors to repay, no favors to seek. They want someone who understands them, whom they understand, and who will speak to them in a way and on a subject which will be for them memorable.

They do not want a survey of "world conditions now confronting us." "Educational conditions which must be remedied" have no pertinency for this occasion in so far as they are concerned. They have heard before, and are tired of hearing, that "the future of this country, yea, the destiny of the world, lies on your shoulders."

The Speaker Sought

The graduate-to-be is hoping for a speaker who really speaks — not one who reads interminably from manuscript. He is hoping for audible, clear, and distinct delivery. He is hoping that the message of the occasion will be one prepared for *this* occasion, not one taken from the files, given a hasty "look through" in the way of preparation, and "revised" by the substitution of humorous stories of recent vintage for those of last year and the year before.

While most listeners prefer a speech which consists of one ostensibly humorous story after another to one consisting of one platitude and generalization after another, they really prefer a speech prepared with *them* in mind.

What they are looking for primarily is a man or woman trained and skilled in the art of speaking, and only secondarily for a man or woman with a reputation and prestige in educational, professional, industrial, governmental, or business fields. They want someone who will take the time to discover "all of the available means of persuasion" in their circumstances and situation in order to make memorable a simple, universal truth which they can remember as long as they live, which will be meaningful to them immediately and become even more so as they gain in maturity and stature in the years following their graduation. They want that thought developed for them by all of the means available: illustration, example, comparison and contrast, quotation from authority, etc., pertinent to or drawn from their own lives, those of the people living in their community, those of men and women of the contemporary world. They want that universal thought applied to their own announced plans for the future.

They want to be the center of attention, the focal point of the speaker's message and the speaker's concern. This is *their* graduation, not the chance for the principal or superintendent to impress the community with how well he has done his job, or for the school board to convince the community that a new schoolhouse should be built, or for a politician to secure support for a legislative proposal.

Where can such a speaker be found? They are all around you, but they must be discovered! One superintendent was forced to accept a "mere member of the faculty" of an area institution of higher education when a last minute cancellation by the "name" speaker already under contract made it impossible for him to secure the services of administrative officials because their services were already elsewhere engaged. He found that this faculty member presented an address far superior to any which high priced talent had previously delivered, an address which considered and reached the graduating seniors and every person in the auditorium. He called it a "truly memorable" address.

Another superintendent permits the graduates-to-be in his school to make the choice of the commencement speaker. One year they heard the judge of a prize speaking contest give his suggestions and criticisms to the contestants in such a down-to-earth and helpful way that they insisted he be asked to give their commencement address.

Who will be *your* commencement speaker this June? Will he be a "big name"? Will he be chosen for who and what he is, or will he be chosen for what he has done in the past and can do again to make of the commencement exercises a "truly memorable" occasion? Can you afford to ignore the purpose of commencement?

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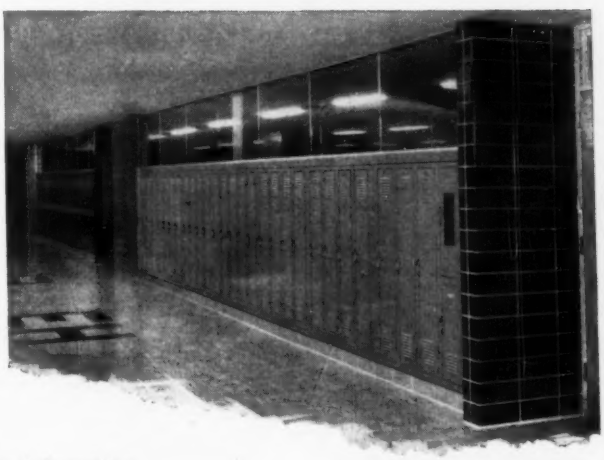

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The Board Led the Way to Higher Salaries

CHARLES W. LAFFERTY
Superintendent of Schools, District No. 97, Oak Park, Ill.

It has always been my good fortune to be associated with school board members who were far ahead of me in vision concerning the basic purposes of the school in our democratic society. I have usually had to go at top speed to keep up with their thinking on how our goals should be attained. This is the story of last night's board meeting when they ran over me.

A new salary schedule was to be considered so the meeting was well attended. The board had been studying the problem of salaries for sometime, had held joint meetings with the faculty salary committee, and had had several sessions on this subject with the administrative staff. For this final meeting, I had prepared recommendations for a new salary schedule, which I imagine showed a certain amount of courage — i.e., in the timid manner of school superintendents. Most of the faculty agreed that the recommendations constituted a fairly reasonable proposal.

It provided for a schedule which would be considerably better than the average for our section of the state of Illinois, though by no means exceptional. The proposal embodied increases in starting salaries of from $300 to $500 and an increase in the yearly increment of $75 and increases of maximums from $350 to $2,500.

Our present schedule for classroom teachers provides for a minimum salary of $4,200 and a maximum $7,500. We were suggesting amendments calling for a $4,500 minimum and a $10,000 maximum. Having outlined these proposals, I sat back and watched the board promptly take the schedule apart, expand it in all directions, and with the assist of a few timely ideas from faculty members and administrative staff who were present, come up with an excellent revision.

While this was going on, I was mentally dashing around with a butterfly net trying to corral the ideas as they popped up. After the firing stopped and the smoke had cleared away, I checked the score with the following results in relation to my proposals:

1. Starting salaries were up an additional $100 to $300.
2. Yearly increments were up an additional $25 to $100.
3. Maximum salaries were up $100 to $2,000.
4. Additional intermediate schedules had been added to make it possible for the teacher to earn salary increases through smaller professional steps in their first years.
5. The minimum for the new schedule became $4,600 and the maximum $12,000.

In adopting this schedule the board declared it was done for three general purposes:

1. To secure a faculty of professionally competent persons capable of providing the quality of education for the Oak Park elementary schools that is desired by the patrons of this school district.
2. To encourage the professional growth of the present faculty members and provide for them a standard of living appropriate to the expectations of this community.
3. To attract outstanding professional persons to fill vacancies on the faculty when these occur.

As I reflect on the proceedings in the light of this new day, I am convinced that there is a moral here which should be noted by all chief school administrators:

MORAL: School board members, faculty, and the administrative staff can get a lot done for the educational program if the superintendent doesn't get in the way.

"Miss Sogge, please call my wife and ask her to lay out my fishing tackle. I am going to encourage progress."

Changing Role of Elementary Principals

The changing role of the elementary school principal is one which places him in the position of key leadership in the shaping of our society. Mrs. Mary E. Pence, president of the board of education of the elementary school district of Ferndale, Mich., in an address before the Elementary Principals' Association of the Michigan Education Association, pointed out that the principal's role is changing to one of participation in all facets of the educational life of the community in and around the school. To a considerable extent, he determines the function of his school and its usefulness to the community in which it is a vital part of the activities and life of that area. Because of the changing role, many new qualifications are being looked for in assigning men and women to this important position.

1. Does he have a broad background of training and proficiency?
2. Is he alert to the changing world about him and of the needs of that world?
3. Is he in good physical and mental health?
4. Is he prepared for effective educational leadership?
5. How much value does he place on good relations?
6. Is he sincerely working for the good of the children under his supervision? Is he constantly seeking new ways to provide a better program?

Today, it is unusual for a school building to be dark at night because there is always some activity going on many nights of the week. It is necessary for the principal to be available, to talk with parents, to speak at a parent-teacher meeting, to supervise recreation activities, to participate in round-table discussions, girl scouts and boy scouts meetings.

The principal is a public relations representative at all activities. In addition to his public relations responsibilities, he is frequently asked to provide leadership within the school in curriculum, instruction, guidance, health, welfare, functioning of the school plant, and protection of school property.

He must be an able administrator and guide of the community, school, and other educational programs, and he must be willing to accept special assignments and coordinate various services.

The demands on the vitality of the principal are terrific. His workday is becoming longer and his evenings and week ends are seldom his own. He is called upon to write or to speak, to take part in community work or conference groups, or to assist in educational development at regional, state, and national levels.

If a community wishes its educational program to continue to go forward and to utilize persons with these leadership qualifications in positions of administration, it must make sure that the position of administrator holds elements of attractiveness. One positive way of doing this is to reflect this in the salary schedule.

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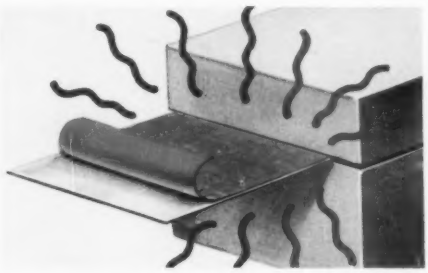

This is Samsonite's STUDENT DESK that pairs off with the student chair. Can be used as desk or table. Available with open front book-boxes, or with lift lid and closed front book-box.

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THE SCHOOL PLANT

(Concluded from page 55)

as high as industrial salaries, but a custodian doesn't have to drive 20–50 miles a day through heavy traffic to get to his job. He isn't faced with seasonal layoffs. He works around people he knows and lives with and he becomes a recognized part of his community. He has regular vacations, sick leave, and social security. Our men are mature but not old. In a sense they have a dedication similar to teachers and have come to recognize a potential achievement level in life beyond simple cash calculation. That we have such men is shown by the fact that, as far as any of us can remember, only *one* man has ever just simply quit. We value our custodians highly and try to show it."

Typical of two extremes in time of employment in Edmonds District are head custodians E. J. "Tommy" Thompson of Edmonds High School and Rollo Hill of Forest Crest Elementary School who separately voiced the same view, "I never worked for a finer outfit in my life than this school district." Mr. Thompson has seen three generations of Edmonds students pass through his school while Mr. Hill, although a long-time resident of the district, has worked only three years as custodian.

Then there is Boyd Turner, head custodian at Esperance School and in his eighth year in the district, who said, "A man here knows he is a part of the organization and a part of the community. We feel like we belong to the school group. We are accepted and our work is appreciated. Naturally we take a big interest in it."

Mr. Turner was a charter member and one of the organizers of the Building Service Employees Union, Local 120, which this year won its first signed contract with Edmonds School District, establishing a union — but not a closed shop.

An example of the union's concept of "working together" came in a recent bond authorization election. The union made a donation toward campaign expenses that was larger than all other donations combined and individual custodians gave inestimable amounts of time in making personal contacts aimed at getting out the vote. The bond election was successful.

The union and the administration have had excellent relations. No small part of this is due to the attitude and philosophy of Superintendent Harold E. Silvernail. His attitude toward working men is a personal one. "My father was a shingle weaver," he said, "Working from paycheck to paycheck and sometimes a long time in between. 'Security' and the 'good things of life' were just words in those days. A man had all he could do to keep himself and his family alive. Things are a whole lot better nowadays but we still have some way to go. When I deal with men concerning wages and working conditions, I think of my father and the good things I'd have liked him to have. Any employer, and especially a school district, must invest directly in its employees and must let them know that they are a valuable asset."

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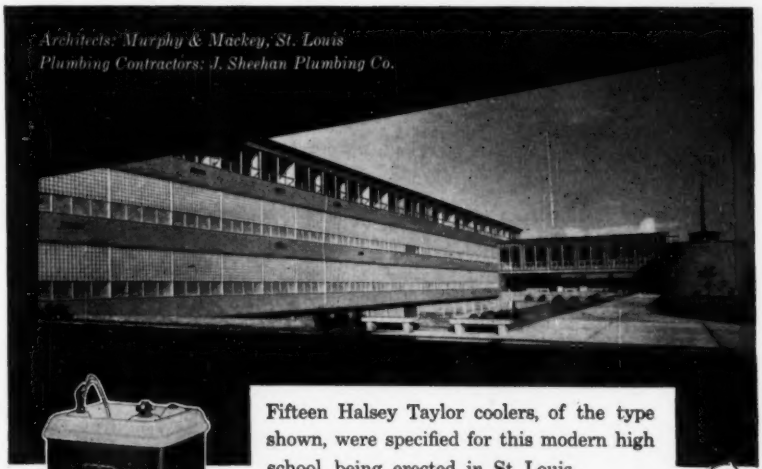

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SCHOOL LAW

Reasonably Improved Highways for School Purposes

STEPHEN F. ROACH

Editor, **Eastern School Law Review**
Jersey City, N. J.

In their efforts to comply with the applicable legal requirements relating to school district operations, school-board members must give careful consideration not only to the provisions of pertinent statutes (as enacted by the various legislatures) but also to the constructions placed upon such statutes by their appropriate state courts.

The terminology employed in legislative enactments is usually (and understandably) so *general* in its nature, that the actual legality of a related *specific* action by a public school agency must frequently be determined by a court interpretation of the statute's meaning.

An interesting case[1] involving this aspect of day-to-day board operations was recently decided in Nebraska.

Facts of the Case

School District No. 228 of Holt County sought to enjoin the Nebraska State Board of Education from classifying the district's two-year high school as *non-operative* and from enforcing a ruling of *non-approval* of the school. The effect of this ruling was to deny high school tuition advantages to the district.

In the trial court the plea of the district was dismissed. This judgment was now being appealed.

The facts showed that on March 1, 1956, the state board notified the local district of the "non-operative" status of the school, which was located at Amelia in Holt County.

The primary ground for the state board's contention that the district high school was nonoperative (and hence not entitled to certain statutory tuition benefits) was the provision of the existing Nebraska statutes which provided: "If for three consecutive years the enrollment of an existing Class II district shall be . . . less than ten pupils in the case of a district maintaining a two-year high school, such district shall not continue to operate . . . if such two-year high school shall be within fifteen miles on a reasonably improved highway of any high school."

It was conceded that District No. 228 was a Class II school district, and that the enrollment in its two-year high school grades was less than ten pupils.

The nearest high school to Amelia was at Chambers. One of the two roads between Amelia and Chambers, was 11 miles long and hence was within the 15-mile requirement of the statute.

Issues of the Case

The specific issue involved in this case was whether or not the Nebraska State Board of Education was correct in declaring the high school at Amelia inoperative because the distance between it and the high school at Chambers was less than 15 miles via a "reasonably improved highway." This narrow issue was, of course, of particular interest only to School District No. 228.

Of much greater significance to Nebraska school boards in general — as well as to school boards in the other states — would be the views of the court as to what constitutes "a reasonably improved highway." This term will be readily recognized by school board members as one occurring frequently in statutes and administrative rules and regulations relating to the transportation of public school pupils.

Findings of the Court

In its consideration of the clause "a reasonably improved highway" the court first noted that the Nebraska legislature had here "used words of common usage and understanding to express its intent. . . . The use of common experience as a glossary is necessary to meet the practical demands of legislation."

In like fashion, it pointed out, "we must draw upon common experience in reaching an understanding of the terms used." In this connection, it emphasized, "effect must be given, if possible, to all [the] several parts [of a statute being construed]. No sentence, clause, or word should be rejected as meaningless or superfluous, if it can be avoided; but the subject of the enactment and the language employed, in its plain, ordinary, and popular sense, should be taken into account, in order to determine the legislative will."

The court then turned to an analysis of the term "reasonably improved highway."

The word *highway*, it pointed out, was one of variable meaning. However, the opinion went on: "We think it clear that the legislature did not use the word in the sense of a highway designated as a part of the state highway system. . . . To so construe it would be to restrict its meaning. . . ."

"As here used, we think the word highway means a public road of general use by the public in travel from place to place."

The court then considered the term *"improved."* In this connection it said: "We think it is used here in the sense of being made better for travel by human effort. This includes one or more of the elements of grading, elevating or lowering a roadbed, surfacing, drainage, and like betterments. The extent of the improvement required is indicated by the qualifying word 'reasonably.'

"We think the word reasonably is here used in the sense of sufficiently. That is, the highway must be improved sufficiently to meet the normal demands put upon its use by children of school age required to attend school regularly." An element to be considered here, the present court added, was "the use of the automobile by school children as a common means of transportation." It noted that the legislature had recognized this fact by providing that a minor over the age 14 years (with certain exceptions) might be issued a limited permit to drive a motor vehicle to and from the school building where he attended school.

The court then considered the applicability of these interpretations to the cited 11-mile road connecting Amelia and Chambers. It noted first that a particular one- to one and a half-mile stretch was the specific portion of the road in dispute.

In relation to this disputed length of road the opinion noted the following pertinent testimony: (1) It (the disputed portion) was from one to six feet below the surface of the land on either side. (2) Its base was a light powdery-type sand which was readily blown away. (3) It was without adequate drainage. (4) Its use was blocked quickly by winter snows, spring frosts, and heavy rains. (5) In the coarse of a year, it would be impassable from ten days to three weeks or more. (6) And, there was no evidence that any effort had been (or was intended to be) made to improve it by regrading or reshaping.

The opinion then concluded: "We find no fact basis in this record to support a finding that this length of road is a reasonably improved highway within the legislative intent. In fact it is not an improved highway in any sense. Man's use and nature's forces have worsened instead of bettered it for travel."

Accordingly, the judgment of the trial court — which had, in effect, approved the state Board's classification of the road as "reasonably improved highway" — was reversed. The state board of education was thus enjoined from enforcing its ruling that the local district high school was nonoperative.

[1] *School District No. 228 of Holt County* v. *State Board of Education et al.*; cited as 82 N.W. 2d 8 (Neb.) (1957) in the West *National Reporter System*.

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NEW BOOKS

Legal Aspects of School Board Operation

By R. R. Hamilton and E. E. Reutter, Jr. Cloth, xi–199 pp., $4.95. Teachers College, Columbia University, New York, N. Y.

A law school dean and a college professor of education have combined forces to present in this book a broad overview of legal aspects of school operation from the standpoint of the school board. The authors have sought to present the law as the courts have decided it to be, and to analyze and generalize the interpretations given to the statutes, the rules and regulations, and the common law. More than most schoolmen writers on the subject, they have avoided their own value judgments and desires and have quite generally allowed the decisions of the courts to speak for themselves. The ultimate authority of school boards and, more important, their responsibility for the operation of the schools are made clear repeatedly in the chapters on pupil personnel, the curriculum, teachers and other employed personnel, school property. The chapter on board membership and meetings is distinctly useful, but the chapter on board procedure, and especially school board hearings, budgetary and other fiscal procedures, and records — is the most valuable part of the work. The final chapter on the liability of school districts and board members reveals again, what is so well known, namely that the old doctrine of immunity is illogical and unjust.

The Local Board of Education

Local References on Local School Administration. Paper, 21 pp. U. S. Department of Health, Education, and Welfare, Washington 25, D. C.

A bibliography for the use of school board members, superintendents, and others engaged in working with local boards of education. The first section contains references having general application. The second section lists state manuals and handbooks published by state departments of education, school board associations, and others, and the third section contains references pertaining to specific topics.

State School Board Association Publications

References on Local School Administration. Paper, 17 pp. U. S. Department of Health, Education, and Welfare, Washington 25, D. C.

This publication contains a listing of handbooks, manuals, pamphlets, and periodicals on specific information helpful to board members in understanding their duties, functions, and responsibilities. A total of 18 associations are listed as providing handbooks for board members in their states, and 17 state associations have available 52 publications of the general handbook type.

Identifying and Educating Gifted Children

By George E. Hill, Rita J. Lauff, and others. Paper, 43 pp., $1. College of Education, University of Ohio, Athens, Ohio.

This monograph takes the position that all children are "gifted," and points out the need for identifying children of unusual ability and for developing special educational programs to realize upon their high potential. In selecting the gifted three criteria of teacher judgment, cumulative grade average, and I.Q. test scores on record are used. A series of tests are also used. It is pointed out that the results of testing, of studies of the educational and occupational plans of children, of follow-up studies, and of pupil opinion polls will be found helpful by administrators and boards in their planning.

Administrative Relationships

Reported by E. G. Guba and Chas. E. Bidwell. Paper, 118 pp. Midwest Administrative Center, University of Chicago, Chicago, Ill.

A research study recording the returns from teachers and principals in 24 schools on (*a*) teacher effectiveness, (*b*) teacher satisfactions, and (*c*) administrative behavior — all intended to help teachers, with the aid of their principals, to do a better job and to help in finding and training effective administrative personnel.

Statistics of the 100 Largest City School Systems

Compiled by Lester B. Herlihy. Circular No. 522, March, 1958. Paper 10 pp. U. S. Department of Health, Education, and Welfare, Washington 25, D. C.

This publication presents a brief summary of the statistics for the 100 largest school systems for the three periods — 1951–52, 1953–54, and 1955–56. The report shows the total enrollment in these 100 city systems as 6,783,667 in 1955–56, an increase of 852,291 pupils, and a gain of 14 per cent. The revenue receipts from all sources in 1955–56 amounted to $2,127,639,000, an increase of $440,264,000 over 1951–52. The total current expenditures for the same period were $1,917,865,000, with an increase of $507,909,000 over 1951–52. For all regions combined, the average current expenditure per pupil was $328.51 in 1955–56, or an increase of $285.36 over 1951–52. The 31 city school systems in the northeast region expended the highest recorded amount of $391.61 per pupil, or an increase of $62.77 per pupil.

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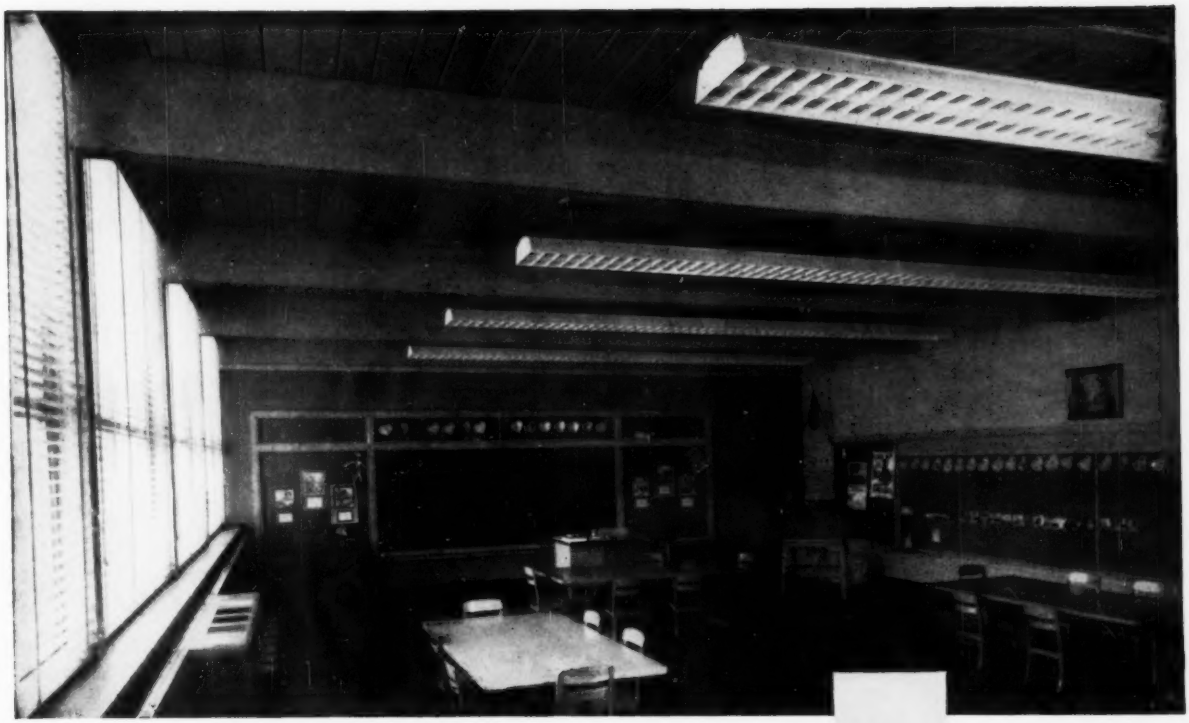

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Architect L. G. Soenke, Davenport, Iowa

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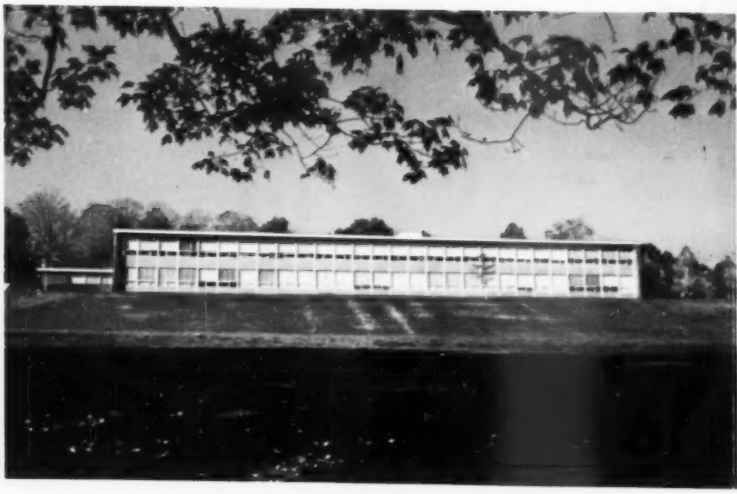

THIS SCHOOL is in Meriden, Connecticut, and it honors a great New England hero with its name: the Nathan Hale Elementary School. The imaginative architects achieved beauty, saved money and increased the usable floor space by using a startlingly simple method of construction: window walls of steel.

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The exterior walls are actually framed with mullions of steel that have the window built right in. The remaining spaces are filled with a sandwich panel: a piece of ⅛″ cement asbestos board backed with 22-gage galvanized steel, faced with 18-gage porcelain-enameled steel—one of the most colorful, durable building materials known to man. **Inexpensive, too!**

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General Contractor: The Hayes Construction Co., New Britain, Conn.
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PERSONAL NEWS

CALIFORNIA

A. Roland Walker, of Pasadena, has accepted the superintendency in Ventura.

Don Herron has been elected assistant superintendent in business for the Hueneme elementary district.

Don Eddie has been elected superintendent in Pleasanton.

J. Smith Jacobs is the new superintendent in Carlsbad.

Robert E. Jenkins, of Ridgewood, N. J., has accepted the superintendency at Pasadena. He was a former assistant superintendent of schools in San Diego.

Arthur L. Littleworth is the new president of the Riverside board.

ILLINOIS

Ernest Poe is the new assistant superintendent of the Wheaton elementary schools.

John E. Kitowski is the new superintendent at Maroa.

INDIANA

Lorin A. Burt has been elected superintendent at Kendallville.

IOWA

E. D. Archambault is the new superintendent at LeMars.

Robert Findley is superintendent at Mitchellville.

KANSAS

W. L. Dundas is the new superintendent at Beeler.

Merald K. Carter has accepted the superintendency at Long Island.

R. L. Ziegler is the new superintendent at Preston.

J. M. Applegate has been elected superintendent at Marquette.

Supt. Valis Rockwell has been re-elected at Hays.

MAINE

Ralph W. Brewer is the new president of the board at Bath.

MICHIGAN

Norbert Radtke has been elected superintendent at Manistee.

K. Wayne Yaple has been elected superintendent at Plainwell, to succeed the late C. W. Lubbers.

Supt. John S. Page of Howell has asked his board to sanction his retirement from the office at the close of the present school year in June. Mr. Page who had two more years to serve, is retiring because of ill health.

MISSISSIPPI

Charles E. Holladay has been elected superintendent at Tupelo.

MISSOURI

Lawrence L. Minor has accepted the superintendency at Palmyra.

NEBRASKA

Hugh Pursel has accepted the superintendency at Mullen.

George R. Nicholas is the new superintendent at Wahoo.

Leon O. Smith, county superintendent of Douglas County schools, has announced his retirement. He was formerly assistant superintendent of schools in Omaha.

NEW JERSEY

Edward A. Szatanski has been elected president of the Hackensack board.

High P. Avery is the new president of the Wyckoff board.

Albert Neuman has been elected president of the Hawthorne board.

Richard Watson is the new president of the Wildwood board.

NEW YORK

Wesley G. Miller is the new superintendent at Jamestown.

OHIO

Leslie O. Woodburn has been elected superintendent at Loudonville.

OKLAHOMA

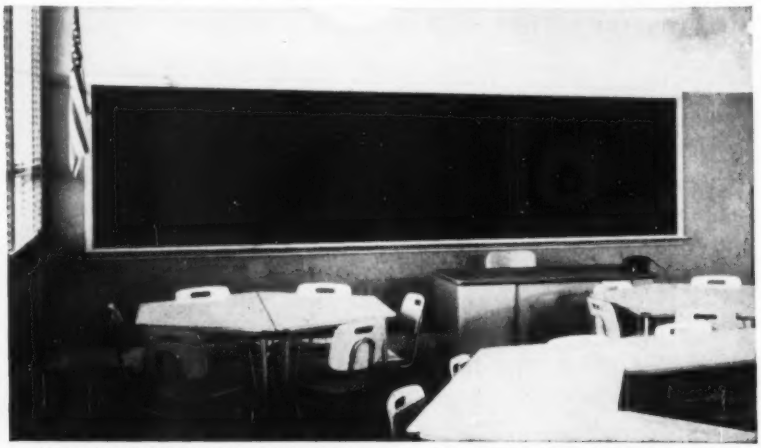
Dale A. Hughey is the new superintendent at Woodward.

G. M. Roberts has been elected superintendent at Bartlesville.

Elbert L. Patton has been elected superintendent at Springer.

VIRGINIA

T. Edward Rutter, superintendent at Arlington since 1952, has resigned to accept the superintendency at Radnor, Pa., Township schools.



West Springfield High School West Springfield, Mass. Arch., Warren H. Ashley West Hartford, Conn.

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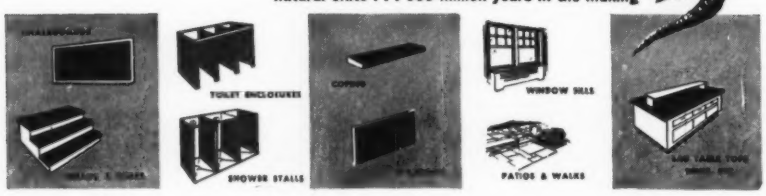

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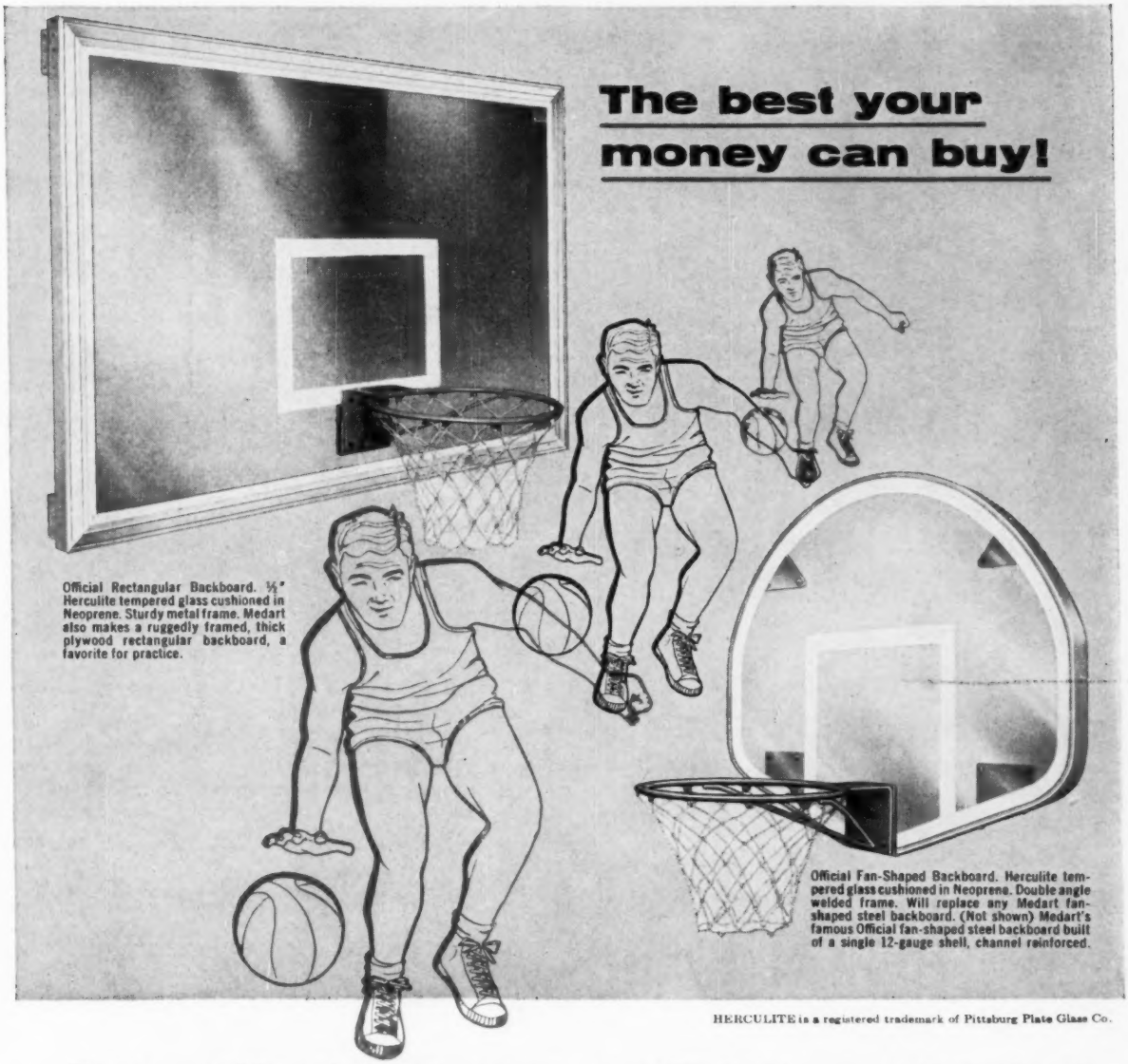
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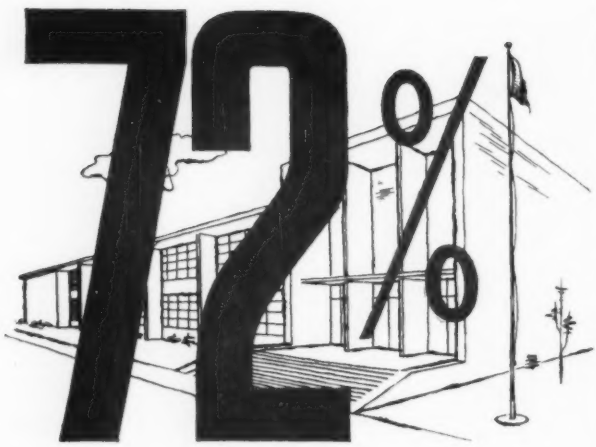

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LOCAL SCHOOL CONTROL

(Concluded from page 30)

tion, achieved not only without any recognition of the demands of democratic process and principle, but through the appropriation of fundamental political powers by a self-appointed private minority. By what right does any private agency lay claim to the fundamental democratic prerogatives of the people? One may agree wholeheartedly with Admiral Rickover's call for higher standards and quality in public education, but to achieve them by surrendering the very source of public policy in education to a private group answerable only to itself, must be recognized as folly of the very first order.

Direction and control of public education from the national level, by whatever agency, can only result in a further shrinking of the boundaries within which the people's participation in the democratic processes of citizenship and government may be exercised. If democracy is lost in America, the probable cause will not be idealogical and physical invasions by a foreign power; it will more likely come about because the people of America have gradually lost the responses and habits of self-government. As the English orator and statesman Edmund Burke said: "All that is necessary for the triumph of evil is that good men do nothing." "The true danger," he also stated, "is when liberty is nibbled away, for expedients and by parts."

Over a century ago, in writing about sovereign power in Europe, Alexis de Tocqueville said in his classic *Democracy in America:*

> Education, as well as charity, has become in most countries at the present day a national concern. The state receives, and often takes, the child from the arms of the mother to hand it over to official agents; the state undertakes to train the heart and to instruct the mind of each generation. Uniformity prevails in the courses of public instruction as in everything else; diversity as well as freedom is disappearing day by day.

The statement appears to be equally applicable today.

A Time of Great Challenge

This is a time of great challenge to the school board members of America. They have the ability to meet it: more than a third have graduated from college or attended graduate school, and over 92 per cent have graduated from high school. If the public schools of the nation have been found wanting, it is up to the citizens of the communities of America, and to the school board members who represent them, to demonstrate that the fundamental faith of our form of government in the wisdom of the people, and in their ability to control their own destinies and purposes, has not been misplaced. That the public schools of the nation need to be improved and strengthened, not only for the good of the youth who attend them, but in the interest of the strength and security of the United States itself, has gone beyond the realm of conjecture. The answer to critics who would deny the right of the people to control their own schools lies in their meeting the challenge of the present threat by so strengthening and co-ordinating their educational programs that the public schools can effectively meet both national demands and local interests.

Democracy, it appears, must demonstrate once again that the myth of totalitarian efficiency, and the fable of democratic weakness, bear no substance in truth. These delusions did not die with Hitler in Berlin, and were not extinguished as the corpse of Mussolini was hung by its feet in an Italian town.

Benjamin Franklin once said: "They that can give up essential liberty to obtain a little temporary safety deserve neither liberty nor safety." In the present crisis, America can preserve liberty and safety both. What is needed to do so is *more* democracy, not less.

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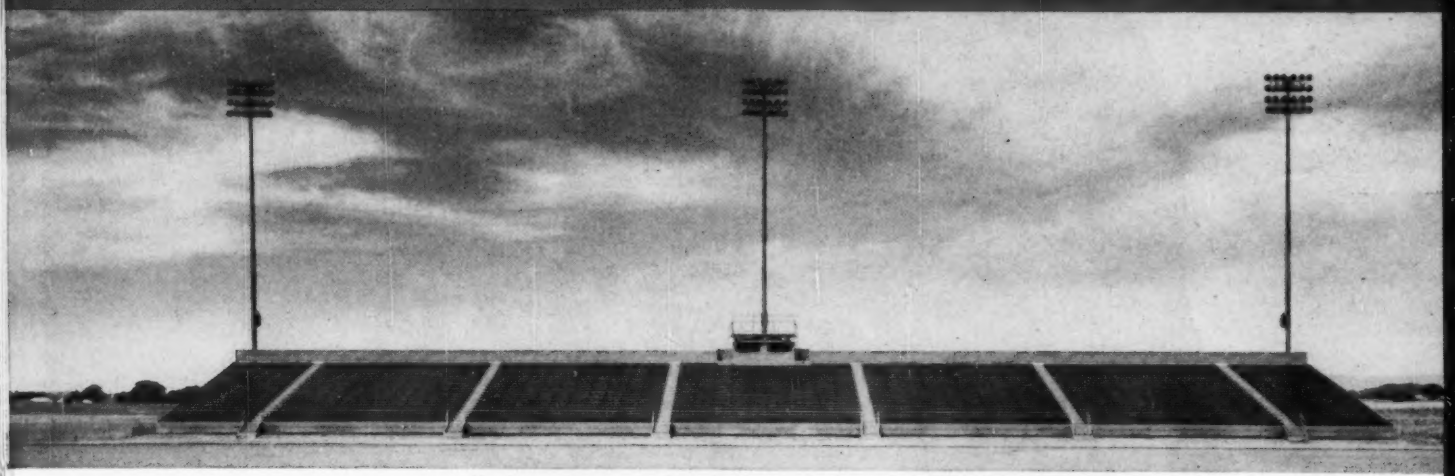

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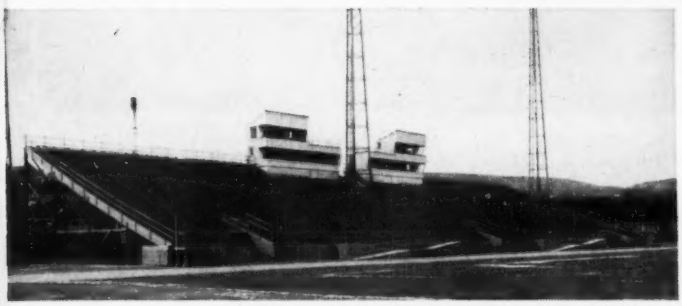

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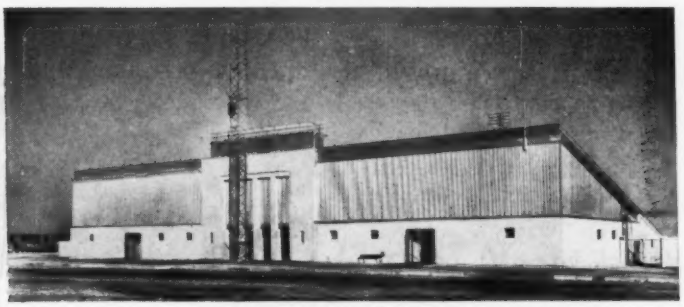

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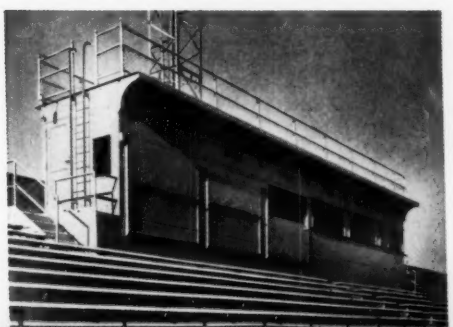

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It's amazing but true, 95c of every floor maintenance dollar goes for labor, only 5c for materials.

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containing detailed product information, specifications, and step-by-step application instructions for every type floor in your school.

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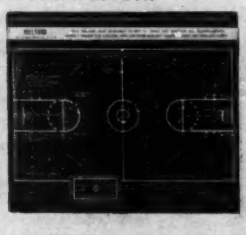

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No danger of flying sticks, stones or other debris. Ideal for mowing areas where children are present—such as parks, parkways, playgrounds . . . and even vacant lots. It costs no more to buy the best! The unique MOTT "Hammer Knife" mower, rugged and simple in design, gives years of useful, trouble-free service. This means *economy* for you! First cost *economy* . . . maintenance *economy* . . . and operating *economy!*

MOTT mowers are available in 18" and 24" (walk-behind); 4, 5 and 6 ft. (tractor mounted) and self-powered gangs to 19 ft.

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WORLD'S LARGEST MANUFACTURERS OF FINE PARK, PICNIC, PLAYGROUND, SWIMMING POOL AND DRESSING ROOM EQUIPMENT

THE SCHOOL SCENE

(Concluded from page 10)

set up, to be offered in the form of newspaper publicity, pictures of honor students on bulletin boards, and honor certificates to be presented at the end of the school year. Students with a 3.0 average or better are eligible to become members. The plan is limited to students in the seventh to the twelfth grades inclusive.

SCHOOL POLICY AND ADMINISTRATION

ACTION PROGRAM FOR TODAY'S CHALLENGE

In his annual report to the school board and citizens in Wellesley, Mass., superintendent John B. Chaffee offered a three-point program "as bold steps that should be taken (in the Wellesley schools) in 1958 to make a breakthrough to future educational excellence":

"1. To make the best use of available time and facilities, lengthen our school year to a *minimum* of 190 school days; and lengthen our work week by adding *at least* 45 minutes per day at the secondary level, and Wednesday afternoon in our elementary schools.

"2. To determine the best use of staff personnel, develop an evaluative procedure by which teachers will be promoted and rewarded; and identify staff members with special skills and abilities, and use them to the best possible advantage.

"3. To improve our educational program and identify the innate capabilities of our students and bring them to the fullest development by strengthening our language arts, mathematics, science, social studies, and foreign languages at all levels."

HOW TO KEEP THE BOARD INFORMED

To keep members of the Northwestern Local School District at Springfield, Ohio, well informed about activities in the local schools, superintendent Richard Brinkman utilizes a three-step plan:

1. A *bulletin* is distributed to board members each month highlighting the major items of importance, interest, etc. A place on the meeting agenda is held for these items if any member wants further information or wishes to comment.

2. An *agenda* is sent out well in advance of each meeting to allow board members time to seek information on the topics.

3. Every other month a group of teachers present a *"How-Do-We-Teach"* program for the board, covering such subjects as reading, science, mathematics, etc. This is intended not only to inform the board about current teaching techniques and materials, but also to acquaint them with teaching aids, teacher problems, etc.

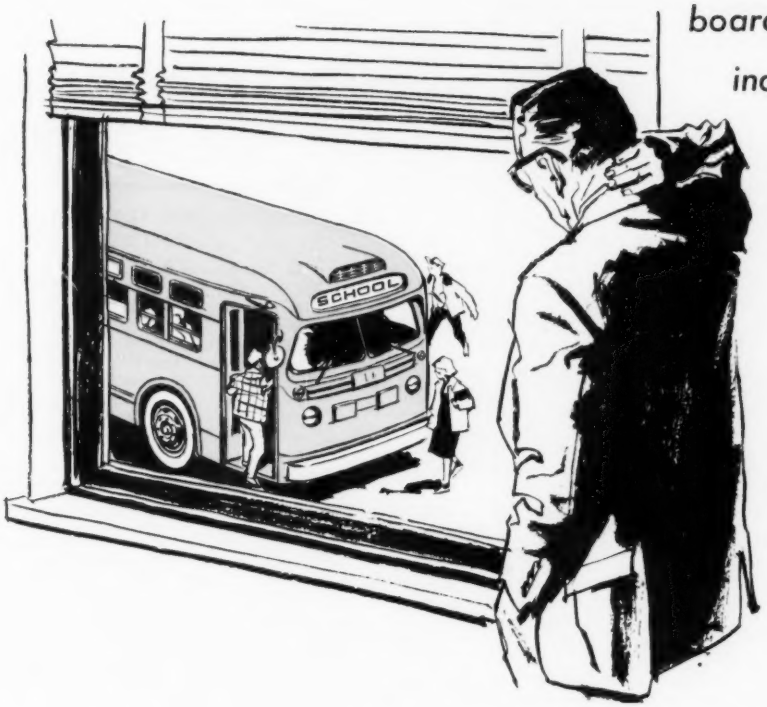
4. *Magazine articles* pertinent to problems in the local schools are duplicated and mailed to board members.

LOCAL SCHOOL-CITIZEN CONFERENCE

A model school-citizen planning conference was held recently by the Richland, Wash., schools. The conference, co-sponsored by the Richland board of education and the Richland P.T.A. Council, aimed to "broaden the base of community understanding . . . and of community participation in determining the schools' program." By-product was increased community support of the schools.

(Continued on page 80)

"What can I, as a school board member, do to increase school bus safety for our children?"



FOR SAFETY'S SAKE... SPECIFY BENDIX-WESTINGHOUSE AIR BRAKES ON SCHOOL BUSES

As a conscientious school executive or board member, you are continually seeking ways to improve operating standards and methods.

Safe transportation of school children is certainly one of your prime responsibilities. When it comes to school buses, there is a very definite, immediate decision you can make for added safety. *That is to insist that every bid on your school buses includes air brakes.*

For many years *air* brakes have been the automatic choice of commercial bus operators everywhere. These men know that *air* brakes are the safest, surest, most dependable means of stopping their vehicles. They know, too, that you can't beat *air* brakes for easy, economical operation.

Why not take a leaf from this broad book of experience! Investigate the *air* brake story and find out exactly what it means in added safety and operating economy on *your* school buses!

The full story is told in our booklet, "Their Safety Is In Your Hands". Write today.

HOW YOUR SCHOOL BUSES CAN BE EQUIPPED WITH AIR BRAKES

On many models of school buses, Bendix-Westinghouse Air Brakes are factory-installed. On all other models, they can be installed at time of delivery, or later, by your dealer and his authorized Bendix-Westinghouse distributor.

Bendix-Westinghouse

AUTOMOTIVE AIR BRAKE COMPANY

General offices and factory—Elyria, Ohio. Branches—Berkeley, Calif. and Oklahoma City, Okla.

THE SCHOOL SCENE

(Continued from page 78)

In brief, the program centered around a keynote address — presented by Mrs. Maybelle K. Chapman, president of the Washington State School Directors Association — and 20 discussion groups (of approximately 16 participants with leaders and records and resource personnel from local schools and local colleges all discussing aspects of "The School Program."

Sample topics: (1) relationships of the school, home, and church in the responsibility of the whole child's development; (2) today's teaching methods, subject matter, and achievement and student capacity; (3) ability to learn and student grouping.

Among the conclusions reached in a typical discussion group considering the present "A, B, C rated report cards": letter alone, or supplemented only by a few check marks, are only "qualitative, not quantitative in their story"; they are too variable and unreliable because of dependence upon individual teachers; they grade relative position in class, rather than absolute achievement, making for misleading and unfair comparative results. Suggestions for improvement: narrative comments by teachers; parent-teacher conferences (while no substitute for an effective grading and reporting system) with the teacher taking the initiative.

SCHOOL STAFF

QUALIFICATIONS FOR THE NEW SUPERINTENDENT

The Kalamazoo, Mich., board of education has made public the basis upon which a new superintendent of schools is to be selected. The board feels that the job requires special skills in administration and leadership. The superintendent should know how to fit together and co-ordinate all the activities of the various departments and people in the school system. He must work with the board of education and serve as leader of the school staff. The following 11 distinct abilities he must possess in an outstanding way: (1) ability to make decisions, (2) knowledge, skills, and understandings of the purposes and processes of education, (3) ability to assume and delegate responsibility, (4) ability to organize and give direction, (5) ability to take initiative and to stimulate others to drive toward educational goals, (6) ability to select and improve personnel, (7) ability to communicate well with others, (8) disposition to co-operate, (9) good health and high energy output, (10) professional training, and (11) demonstration of effective leadership.

TEACHER'S SALARIES IN ILLINOIS

A recent survey on Illinois teachers' salary schedules for the 1957–58 school year, taken by the education department of the Illinois state chamber of commerce, revealed these trends:

- Median salaries paid to beginning teachers with a bachelor's degree range from $3,700 to $3,900; for beginning teachers with a master's degree, from $3,900 to $4,200.
- Median maximum salaries range from $4,600 to $5,675 for teachers with bachelor's degrees; $5,100 to $6,200 for a master's.
- Increments range from 12 to 15 to reach top salary.
- Most schools provide extra payments for athletic coaching and such additional duties as supervising school newspapers, dramatic productions, etc.

Despite improvements in the status of teachers' salaries, the study revealed "unsolved problems," such as incentive pay for superior teachers and inadequate starting pay for heads of families.

SCHOOL BUILDING AND OPERATION

ELECTRONIC POLICEMEN STOP VANDALISM

In Hackensack, N. J., "electronic policemen" have cut the costs of vandalism from $50,000 three years ago to nothing. Under this system, sensitive microphones are hidden in shut-down schools and pick up sounds from school buildings. When the noise level rises above normal, an alarm goes off at police headquarters. The school board installed the electronic alarms last fall at a cost of $10,000 after vandals had destroyed several thousands of dollars worth of musical instruments.

SCHOOL BUS TRENDS IN WASHINGTON

In a review of the school bus transportation trends in Washington during 1957, the state department of education recently reported:

1. 207,702 pupils were transported;
2. 2891 school buses and cars were used to transport children, 2717 owned by the districts and 174 owned by private companies;
3. 2652 school bus drivers were employed in transporting children, 2236 regular drivers and 416 teachers and students;

(Concluded on page 82)

Gym Costs Are No Problem With Money-Makers Like This

Wonderful Exercise Fun Too!

Community Skating — Our Lady Lourdes High School, Marinette, Wis.

$13,000 net from roller skating! That's how this school helped finance its new gym and more than paid the cost of its floor the very first year! Soft, dead flooring which false economy sometimes substitutes can't take skating, of course. For maximum liveliness with wear, make your floor Wells' DIAMOND HARD Northern Maple too.

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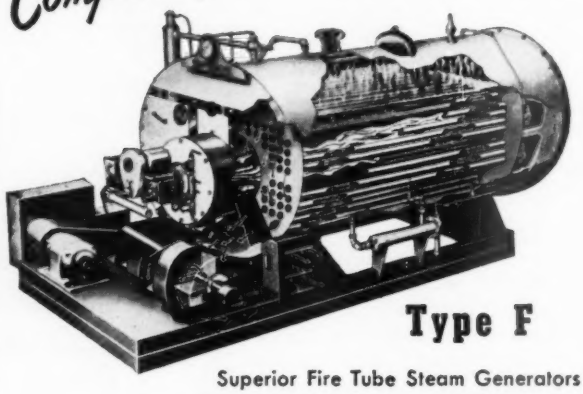

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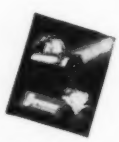

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Superior Fire Tube Steam Generators are completely factory assembled and tested. Capacities range from 20 to 600 b.h.p. for steam or hot water heating and for industrial applications requiring pressures to 250 p.s.i. Built-in induced draft and full 5 sq. ft. of heating surface per b.h.p. provides efficient operation firing oil, gas or both.

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Universal Roll-A-Way* Bleachers
provide more comfortable leg room than any others

When selecting or specifying gymnasium bleachers, it is only natural for you to favor those which provide maximum seating in minimum space... for economy's sake.

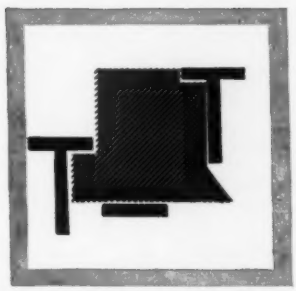
But what about the spectators? Are you considering their *comfort?* Cramped seating facilities don't encourage big turn-outs for basketball games or other events.

Here is the answer:

When designing Roll-A-Way Bleachers, *Universal* engineers calculated seating comfort for spectators and attained maximum seating in minimum space as well. This exclusive design was based on the fact that, without a backrest, a bleacher seat could be comfortable only when there was ample room for a spectator to move his feet freely and balance his body.

In the illustration above, notice the seated spectator's natural, comfortable position. There's ample room for feet in any desired position... extended or drawn back under the seat.

Make all the tests you wish. Compare design, construction, dimensions, seating area... and you'll find that *Universal* Roll-A-Way Bleachers offer the greatest possible comfort in gymnasium seating. Write for free catalog.



The extra distance from seat board to foot board (18½") and the position of the vertical filler or riser board (centered under seat) assure maximum space per spectator... permitting normal positions of feet drawn back under the seats. Compare this with other makes which have 2" or 3" less space and vertical filler boards flush with seat fronts (smaller total area shown in lighter tone of illustration above).

*T. M. Reg.

UNIVERSAL BLEACHER COMPANY

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Adjustable Height WALLMOUNTS

Schooline®

WARDROBE SYSTEMS

Solve the pupil wraps problem efficiently with Wallmount Coat and Hat Racks. Mount on any available wall space. Hat shelves and hanger bar adjustable on permanently attached columns to height for any age group. Double hat shelves and double row of spaced coat hooks accommodate 6 pupils per running foot. Basic 3' 2" or 4' 2" units interlock to make continuous racks to fit any space or capacity requirements.

OTHER Schooline® UNITS

CHALKROBE®

Dual-purpose wardrobe rack. Provides two 4 ft. hat shelves, 4 ft. Hook and Hanger rails for coats adjustable in height to all age groups. 4 ft. overshoe shelf. And, on other side a 50" x 48" chalkboard. Portable or stationary.

CORKROBE®

Identical to Chalkrobe but with pin-up cork board instead of "Chalkboard". These units permit complete flexibility in use of floor space. Can be anchored to floor, or wheeled about on casters. Hold wraps out of the way in orderly and efficient manner.

CLOSURE UNITS

With closure panels (as original equipment or add-on units) Chalkrobe and Corkrobe units serve as flexible room dividers, movable walls or screens. Widely used to enclose temporary class rooms, to "build" cloak rooms, meeting rooms, etc.

OVERSHOE RACKS

Matching units for Wallmount. Keep overshoes off-the-floor in an orderly manner.

Write for "Schooline" Catalog SL-206

VOGEL-PETERSON CO.

1127 West 37th Street • Chicago 9, Illinois

THE SCHOOL SCENE

(Concluded from page 80)

4. 21,760,367 total miles were traveled on approved routes;

5. $3,280,336 was expended in transportation expense and $6,016,896 was expended for supplies and transportation equipment.

COMPLETE BUILDING PROGRAM

The public schools of San Antonio, Tex., have entered upon the second phase of a school building and modernization program which will eventually involve a total cost of about $25,000,000. The current construction program will comprise three junior high schools, two senior high schools, and two elementary schools. An additional junior-senior high school is now in the planning stage.

The program also includes the renovation and remodeling of many older buildings. The provision of these added facilities has eliminated double sessions in all schools.

SCHOOL BUSINESS

INSURANCE DIRECTOR APPOINTED

In Lodi, Calif., the school board has appointed a "director of the school insurance program." James L. Gleason will rewrite some $2,300,000 in fire insurance policies in an attempt to reduce premium costs. It is estimated that the new policies will save a minimum of $1,000 to $1,200 over the next five-year period.

STUDENT INSURANCE

An area of school finance causing growing concern is the problem of student accident insurance. Recent reports indicate that schools are tending to offer parents accident insurance protection at nominal costs while their children are at school; most systems pay for athletic insurance, however.

Several indications:

● The Freeport, Ill., school accident insurance plan covers accidents at school and at supervised play. The cost to parents is $1.50. Not covered in the program are accidents to school children on their way to and from school and engaged in high school football — the latter being protected in a blanket high school football policy for a minimum of 1500 students at 25 cents a student. This premium is paid for by the high school athletic association.

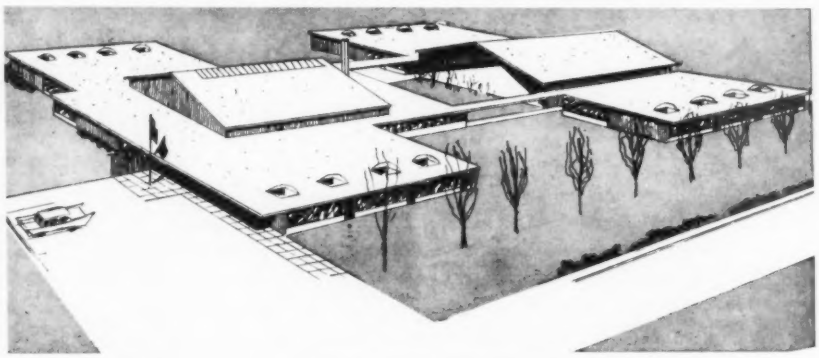
● Programs with the same coverage have been recently adopted in Austin, Tex., and Pottstown, Pa. Cost for parents of students in the Ambridge, Pa., and Tifton, Ga., schools, however, is $1.75 per pupil.

● An idea of the total cost of athletic insurance to a typically sized community has the New Haven, Conn., paying $4,323 per annum.

In a varying direction the Torrance, Calif., board adopted a general program of accident insurance available to parents of all elementary and high school students. The individual premiums range from $2.25 for graders to $2.50 for high school students, with a $12.50 rider for high school football players.

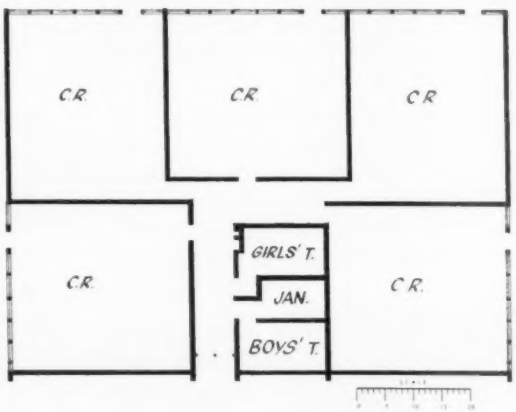
OUTSTANDING GOVERNMENT DEBT

The Department of Commerce reports that as of June 30, 1957, the total indebtedness of state and local government units was $50,445 million. Of this amount, $13,938 million was owing by educational units, and $689 million by state institutions of higher learning. Other educational institutions owed $13,294 million. The debt for education was 27.7 per cent of all state and local indebtedness.



THE FIVE-ROOM CLUSTER IDEA

The new Mountainview elementary school in Lacey, Wash., clusters its 20 rooms in five-room units. Above is a sketch of the school's four clusters and at right is a floor plan of a typical cluster. Advantages of the design include efficiency of room arrangement and economy. Architects of the school were William Arild Johnson and Associates, Everett, Wash.



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TYPE "C" permanent
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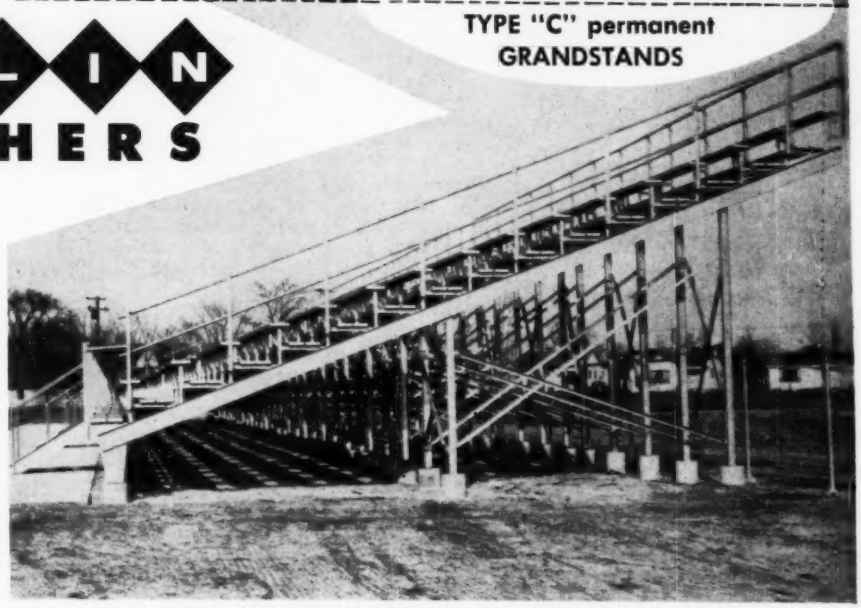

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Before making your bleacher purchase, we invite you to thoroughly investigate BERLIN Bleachers. You will find that whether for indoor or outdoor seating BERLIN Bleachers have features that make them the most outstanding bleachers offered schools today.

EZ-A-WAY Mechanical Folding Bleachers are actually in a "class by themselves" . . . all custom built to your requirements . . . they are not stock items and extreme care is taken to assure that your installation will be in perfect accord with your desires. One of the BERLIN exclusive features to enable you to furnish maximum floor space for balcony activity is the delayed action forward fold . . . this in addition to scissor cross bracing that assures perfect alignment during opening and closing — true "floating" action developed by BERLIN CHAPMAN COMPANY and never successfully copied . . . a slide arm bracket that assures ease in opening and closing . . . no springs . . . no rods . . . no exposed angles or nuts to mar shoes or scratch occupants. Complete information upon request.

BERLIN Type "C" Standard Permanent Grand Stand is a rugged dependable, neat appearing stand with clean, pleasing lines. It requires a minimum number of concrete footings, and is easy to clean underneath entire stand. Complete details in new catalog-folder. Write for it when you are planning your next outdoor installation.

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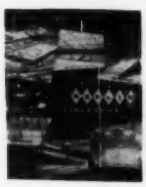


SCHOOL PRODUCTS GUIDE

EQUIPPING SCHOOL PLAY AREAS

The importance of planning and equipping the recreation areas of school sites is understood when the school planner considers that the modern program invariably encompasses many play activities for children ranging from the completely unsupervised free play of a spontaneously formed group on the playground before school or at noon hour to outdoor classes in physical education or formally organized field days.

Many of these play activities are continued over the weekend and through vacation periods, with or without formal organization and supervision. Also, older youth and adults may use the school grounds for organized games such as baseball, touch ball, or tennis.

The type and extent of play areas, and therefore selection of equipment appropriate for these areas, depends upon the philosophy of the physical education program of the district. Municipal recreational uses planned for the areas is another basic factor, as is the size and orientation of the site. General rules for equipping play areas, however, can be considered, especially as these rules apply to elementary and secondary schools.

The Grades

For the elementary school, play areas are generally divided into three types — apparatus areas, turf areas, and surfaced areas.

Children at the primary and elementary grade levels enjoy individual activities on playground apparatus more than team games and authorities agree that they can benefit in improvement of muscular coordination from exercise on swings, slides, seesaws, jungle gyms, etc. The play areas for these schools, therefore, are generally characterized by the presence of this type of play equipment.

Often, less formal type of material, such as concrete pipes, low, wooden jungle gyms with platforms, etc., that may be feasible because of the terrain of the school site can be provided by the creative architect as supplementary equipment.

While the factors mentioned above dictate the kind and amount of equipment provided in elementary school play areas, the following lists are frequently recommended as standard:

1. The kindergartens — small jungle gym, 10-by-10-foot sandbox; low seesaws or teeterboards, 8-foot swings, 6-foot slides;
2. Older primary grades — climbing structures, 7-foot horizontal ladder, 20-inch fulcrum seesaws, 8-foot high slides, 10-foot frame swings, traveling ring sets.

Miscellaneous equipment includes merry-go-rounds, wading pools, etc.

The play areas of elementary schools should be located near the school building so that it will be easily accessible to children and convenient for teacher supervision. The location of these areas to traffic lines, their separation for safe use by children in the various grade levels, and the space needed for each piece and type of equipment is an involved subject. Valuable information on these subjects can be obtained from many sources, especially the pertinent chapters in "Planning for School Buildings," by James D. MacConnell.

Fundamental recommendations concerning the spacing and location of the play apparatus, however, invariably include that at least the swings should be protected with a low fence. Also, a simple, protective fence might well enclose the entire playground equipment area. In addition, some protecting surface under the equipment has become to be recognized as extremely desirable.

The turf area of the elementary school site, usually utilized by elementary school children for informal play activities, for running, and for low organization games, require little in the way of equipment. Older elementary children will use this area for softball, field ball, etc.

The surfaced, all-weather area is ideal for conducting games which require only painted dimensions and minimum equipment.

The High School

In secondary schools, the physical education accent is on team and group activities. A tremendous variety of sports is provided in the modern program: football, baseball and softball; basketball, volleyball, and handball; badminton and tennis are all popular. Ice hockey and ice skating areas are converted from spaces for the above when the climate permits.

Equipment for these areas consists mainly of the stationary standards used in play of the games: outdoor backboards and hoops for basketball, tennis backstops, net posts, and nets, volleyball and badminton standards, etc.

A major item of planning for secondary school play areas is the type of stadium or stands for the seating of spectators at inter-school athletic contests (football, track, etc.) or at community events. The need for such seating depends, of course, upon the size of the events contemplated for the facilities as well as the financial situation of the district. Very often, storage space and lockers and shower rooms can be conveniently and economically located under the seating accommodations.

Specific aids in helping you equip the play areas of your school sites are offered without obligation by our advertisers in the form of booklets, catalogs, etc. Divided into categories of equipment, they include:

1. Play apparatus (swings, slides, etc.) —

American Playground Device Company: *Product Catalog,* listing various types of play equipment, sizes available and costs, with handy material and personnel installation instructions (for your free copy, please circle SPG-21 on the "Reader's Service Section" index card across from the last page of your JOURNAL).

2. Surfacing material —

American Bitumuls and Asphalt Company: *The Walk-Top Story,* a complete file on an asphaltic compound, where and how it is applied, etc. (for your copy, please circle SPG-22).

U. S. Rubber Reclaiming Co., Inc.: *Bulletin # 11,* describing "Saf-Pla," a rubberized surface material for minimizing playground apparatus injuries and abrasions (SPG-23).

3. Fence and Backstops —

U. S. Steel, American Steel and Wire Division: *Cyclone Fence,* cataloging various types of fences, tennis court enclosures and ball field backstops, gates and other fence products with specifications and details (SPG-24).

4. Stadiums —

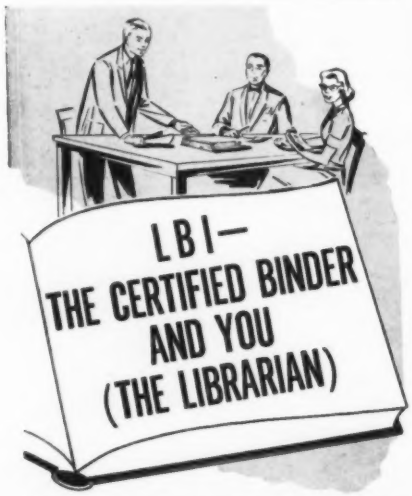
Pittsburgh-Des Moines Steel Co.: *Grandstand Catalog,* demonstrating the versatility of all-steel grandstands, with specifications and with illustrations of installations (SPG-25).

U. S. Steel, American Bridge Division: *Catalog,* with detailed information on "planning a stadium," kinds and sizes of structures available, charts, diagrams, and illustrations of installations, etc. (SPG-26).

5. Bleachers —

Hussey Manufacturing Company: *Model 6 and 8 Catalog,* describing portable steel bleachers and grandstand with specifications and other information (SPG-27).

(This literature will be sent to you free of charge. Circle the number of the booklet on the "Reader's Service Section," across from the last page of the Journal.)



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TO LEARN MORE ABOUT LIBRARY BINDING AND HOW IT AFFECTS YOUR JOB AND THE FUTURE OF ALL LIBRARIES, WRITE TODAY TO:

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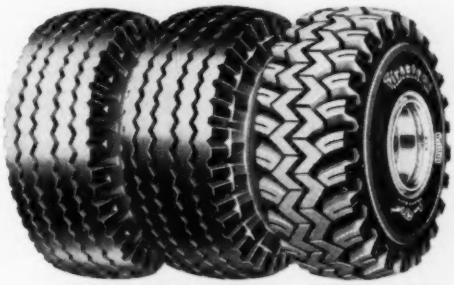
RECORDS PROVE FIRESTONE SCHOOL BUS TIRES DELIVER EXTRA MILES, EXTRA SAFETY!

Bus and truck tire records covering 36 billion miles from all over the country prove conclusively you can't buy a school bus tire that costs less per mile than Firestone. And there's a Firestone tire to meet every school bus need. If you're on a tight budget and want a minimum investment in tires, Firestone Transports are your best buy. If you want maximum mileage and extra long life whereby a small added investment will pay you back with 50% more mileage, get Firestone Super Transports. For top-notch all-weather performance, Firestone Super All Traction tires are tailor-made for you. See your Firestone Dealer or Store today and let him analyze your tire needs. He will match your needs with a *tubed* or *tubeless* Firestone tire that will give you accident-free, dependable stop-and-go service and the best tire value for school tax dollars.



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Firestone

BETTER RUBBER FROM START TO FINISH

News of Products for the Schools

STERLIZER FOR LARGE CANS

The AerVoiD Sterilizer will clean and sterilize refuse cans, mixing kettles, milk cans, and other large kitchen utensils up to 25 inches in diameter. It operates quickly and efficiently at a saving of time and labor. Operated by a convenient food pedal, it can be used with

Labor-Saving Utensil

cold, or hot water and steam, in any combination or sequence. It features a rotating spray nozzle with jet sprays that wash every area with a scouring action. The legs are adjustable to various floor levels. Automatic safety locks protect against accidental operation. According to the manufacturer, Vacuum Can Co., Chicago, the model meets code requirements of the U. S. Public Health Service.

(For Further Details Circle Index Code 059)

TEACHER'S DESK

A new teacher's desk which matches the company's Tempo line of school furniture has been announced by Griggs Equipment, Inc.,

Matches Student Desks

Belton, Tex. The desk is available in a single pedestal style with a 30 inch by 42 inch plastex top or with a double pedestal style with a 30 inch by 60 inch top. The welded tubular steel frame is finished in baked-on enamel in colors of beige, dove gray, sage green, coral, or ocean blue. The over-all design of this up-to-date desk provides a large storage area and a graceful uncluttered appearance.

(For Further Details Circle Index Code 060)

NEW TERRAZZO TONES

The addition of three new terrazzo tones to the Vina-Lux tile line has been announced by the manufacturer, Azrock Products Division, Uvlade Rock Asphalt Co., San Antonio, Tex. The new reinforced vinyl tiles are the Empire, a light lime-green tile with green and white chips; Saratoga, white with gray and black chips; and Golden Gate, also white but with russet and gold chips. The addition of these three new colors brings the total Vina-Lux line to thirty-four.

(For Further Details Circle Index Code 061)

SIMPLIFIED SCHOOL DESK

This student desk is designed for any classroom grouping where minimum book storage is required. The exceptionally sturdy and com-

Sturdy Seating

plete unit is welded into one integral frame and allows complete freedom of movement. The 18 inch by 24 inch (NEMA-approved) plastic top writing surface, is a light natural birch color and is made of 11-ply select northern hardwood. The desks are available in metallic bronze, metallic green, and chrome finishes with an optional bookrack. Manufactured by Southeastern Metals Co., Birmingham, Ala.

(For Further Details Circle Index Code 062)

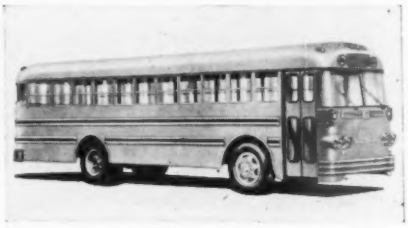
ADJUSTABLE BANQUET TABLE

The Virco-Matic banquet table has a versatile new design that is adaptable for use in classrooms, churches, or any large gatherings. The table is automatically adjustable to heights of from 21 inches to 31 inches, and has a positive lock that will adjust to the table height. Table tops are available in measurements of 36 inches by 72 inches and 30 inches by 96 inches, and are constructed of either Masonite or Vircolite plastic. Made by Virco Mfg. Corp., Los Angeles, Calif.

(For Further Details Circle Index Code 063)

EMPHASIS ON DRIVER SAFETY

Driver safety highlights the new design of the Oneida Warrior School Coach for 1958, manufactured by Oneida Products Div., Henney Motor Co., Inc., Canastota, N. Y. The body has wrap-around crash rails for collision safety. Other features designed for driver



Redesigned School Bus

convenience are a personalized cabinet and rack, redesigned instrument panel for immediate identification, and finger-tip controls. New air scoops and swing windows provide added ventilation, foam rubber driver's seat, and a pocketbook tray for women drivers have been added for driver comfort. The new coach includes wider seats for students and augmented body ventilation. The restyling includes dual all-weather headlights, parking lights, and aluminum grill work.

(For Further Details Circle Index Code 064)

PROJECTOR SOUND ATTACHMENT

Victor Animatograph Corp., Plainville, Conn., has introduced a new unit that enables anyone to make magnetic film recording and to play back sound film on any Victor 16mm.optical sound projector. With this accessory unit, voice and music can be recorded on any magnetic-stripped single or double perforated 16mm. film simultaneously and professionally. Sound track can be added at any time. Recordings will last the life of the film or they can be erased and recorded on the same film track.

Major components of this unit, called the Mixer Magnesound, are a magnetic sound drum incorporating separate second-playback and erase heads, microphone and magnetic amplifier. All come in a compact, lightweight carrying case.

(For Further Details Circle Index Code 065)

TWO NEW DRINK VENDORS

Two new vending machines serve paper cups filled with either cold milk or a chocolate shake made with a milk base. The machines are produced in quantity by Glascock Bros. Mfg. Co., Muncie, Ind., in co-operation with Mr. Robot, Inc. Served at a constant temperature of 32°, the drinks are aerated during dispensing, a process that improves their finish. Vendors will hold two five gallon cans or one ten gallon can of milk and dispense as many as 380 cups without refilling. Machines may be set for 8 oz. portions or for any size serving at any price. The vendors, 34¼ in. wide, 27 in. deep, 69 in. high, are equipped with automatic cup separators and coin change mechanisms.

(For Further Details Circle Index Code 066)

(Concluded on page 88)

CORRESPONDING CODE INDEX NUMBERS TO BE ENCIRCLED CAN BE FOUND ON THE CARDS IN THE READER'S SERVICE SECTION

Chassis that stand at the top of their class!

When it comes to the big tests—National School Bus Standards—Chevrolet school bus chassis rate top honors for performance and dependability. For Chevy meets every standard—and far surpasses requirements in such vital departments as horsepower-to-gross-weight ratio, stopping power and hill-climbing ability.

That's why more students get to school on time in Chevrolet than in any other make. And why it's a good idea to visit your nearby Chevrolet dealer for the full report on Chevrolet school bus chassis. Why not make it soon? . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

CHEVROLET

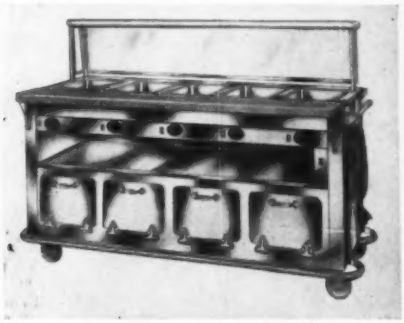
CHEVROLET SCHOOL BUS CHASSIS

News of Products . . .

(Concluded from page 86)

HOT BUFFET CARTS

A new line of mobile food handling equipment has been announced by Franklin Products Co., Chicago, with the introduction of three new models of Thermotainer serving



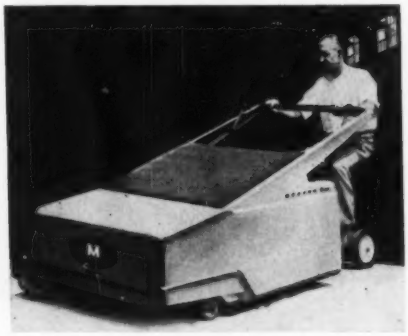
Portable Food Cart

carts. Models have two, three, or four hot food compartments, each measuring 14 by 9 by 23½ in. deep. The open surface top has three steam table wells, each accommodating a 12 by 20 in. pan. Each well is controlled by a separate thermostat and individually insulated for either hot or cold food service. Stainless steel cabinets feature removable stainless steel slides on compartments.

(For Further Details Circle Index Code 067)

STREAMLINED POWER SWEEPER

A streamlined sweeper that may be used either indoors or outdoors has been marketed by the Modern Power Sweeper Co., Azusa, Calif. Called the Modern Super Sweeper, it has a sweeping swath of 36 in., and, by using the additional 12 in. side broom, more than 50,000 square feet can be covered in an hour.



Modern Sweeper

The heavy front bumper and the frame structure are of steel, side and panel hood are constructed of reinforced laminated Fiberglas and polyester resin. Other features of the sweeper are a flannel dust bag which checks dust seepage even during operation, and fingertip machine adjustments. There are seven controls for normal sweeping, two for sweeping grass or gravel areas, and a position to retract the brushes while the sweeper is being stored or transported.

(For Further Details Circle Index Code 068)

CATALOGS AND BOOKLETS

The Mississippi Glass Company, St. Louis, Mo., has released its new catalog, 58-G. Of special interest to school board personnel will be the sections on glass pattern characteristics and light transmission data.

(For Further Details Circle Index Code 069)

"Sound Conditioning for Schools and Colleges," a new 12-page brochure published by The Celotex Corporation, Chicago 3, Ill., details the advantages of well-planned acoustical ceilings for educational buildings.

(For Further Details Circle Index Code 070)

A bulletin available from the Barber-Colmann Company, Rockford, Ill., describes a new control package which may be applied to any conventional electric heat unit ventilator.

(For Further Details Circle Index Code 071)

A new 12-page bulletin describes the complete line of Herman Nelson heating, ventilating, and air conditioning products. Bulletin 701 is available free of charge from Dept. PD, American Air Filter Co., Louisville 8, Ky.

(For Further Details Circle Index Code 072)

A brochure available from the National School Equipment Company, Port Washington, Wis., presents, in color, a functional new line of classroom furniture.

(For Further Details Circle Index Code 073)

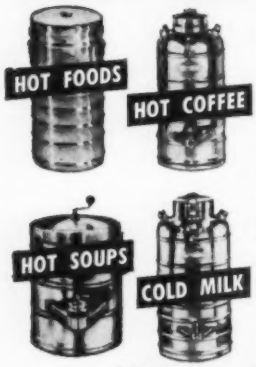
Hussey all-closed-deck roll-out gym seats are now available in Solid Genuine African Mahogany. For free catalog write to Hussey Manufacturing Company, North Berwick, Me.

(For Further Details Circle Index Code 074)

CORRESPONDING CODE INDEX NUMBERS TO BE ENCIRCLED CAN BE FOUND ON THE CARDS IN THE READER'S SERVICE SECTION

Institutions — Schools — Hospitals — Industrial Plants — Hotels — Caterers — Camps — Air Lines — Government — Civil Defense — Commercial Feeding Operations.

THE "AERVOID" CENTRAL KITCHEN SYSTEM HAS PROVED ITS WORTH IN ALL FIELDS OF MASS-FEEDING



AerVoiDs provide . . .
Sanitary Vacuum Insulation -
A positive Health Safeguard!

To-day's "Modern" trend toward centralization of food preparation is a milestone toward Economy, Better Quality and Higher Sanitary Standards.

Into this new picture nothing fits like AerVoiD's Portable, Stainless-Steel, High-Vacuum Insulated, food, soup and liquid Carrier-Dispensers. AerVoiDs alone provide the proven quality and durability to survive under rough usage, spreading their cost over a long period of uninterrupted service.

All AerVoiD Equipment, so indicated in our specifications is "In Compliance" with the sanitary construction requirements of the U. S. Public Health Service Ordinances and Codes.

Write for FREE Literature Kit ASB-01
Our Consulting Service is also FREE

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LINE ENGRAVING
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HALF TONES
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AND ART STUDIO.
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READER'S SERVICE SECTION

INDEX TO SCHOOL EQUIPMENT

SCHOOL PRODUCT GUIDE

Literature, catalogs, and other services reviewed in this month's School Products Guide column (page 84) will be sent to you free. Please encircle the code number listed in the column on page 84, sign the card, and mail it to the SCHOOL BOARD JOURNAL.

- **SPG-21** American Playground Device Co.: Catalog
- **SPG-22** American Bitumuls and Asphalt: The Walk-Top Story
- **SPG-23** U.S. Rubber Reclaiming Co.: Bulletin No. 11
- **SPG-24** U.S. Steel Co.: Cyclone Fence
- **SPG-25** Pittsburgh-Des Moines Steel Co.: Grandstand Catalog
- **SPG-26** U.S. Steel Co.: Stadium Catalog
- **SPG-27** Hussey Mfg. Co.: Models 6 and 8 Portable Bleachers Catalog
- **SPG-28** The School Grounds: Landscape and Care

The index and digest of advertisements below will help you obtain free information, catalogs, and product literature from the advertisements and companies listed in the new products section. Merely encircle the code number assigned to each firm in the request form below, clip the form and mail it to THE AMERICAN SCHOOL BOARD JOURNAL. Your request will receive prompt attention.

Code No.		Page No.
50	**All Steel Equipment, Inc.** Complete line school furniture.	59
51	**American Desk Mfg. Co.** School seating.	ins. bet. 16 & 19
52	**American Playground Device Co.** Playground and swimming pool equipment. Write for literature.	78
53	**American Seating Co.** School seating.	ins. bet. 40 & 45
54	**Arlington Seating Co.** School furniture. Write for free catalog.	67
55	**Bendix Westinghouse Automotive Air Brake Co.** Air brakes.	79
56	**Berlin Chapman Co.** Ez-A-Way mechanical folding bleachers.	83
57	**Beseler Co., Chas.** Opaque projector. Write for illustrated brochure.	78
58	**Chevrolet Motor Div. General Motors Corp.** School bus chassis.	87
59	**Delta — Rockwell Power Tool Div.** Power tools.	74
510	**Firestone Tire & Rubber Company** Tires.	85
511	**Griggs Equipment, Inc.** School seating.	57
512	**Guth Co., Edwin F.** School lighting.	4th cover
513	**Heywood-Wakefield Co.** School seating.	ins. bet. 22 & 25
514	**Hillyard Chemical Co.** Maintenance equipment. Use coupon page 77 for information.	76 & 77
	Hope's Windows Window wall fabrication.	USS Steel ins. bet. 69 & 72
515	**International Business Machines Corp.** Electric typewriters. Data processing.	14
516	**Library Binding Institute.** Library binding. Write for information.	84
517	**Maple Flooring Mfgrs. Assn.** Northern hard maple.	5
518	**Medart Products, Inc., Fred** Basketball backstops. Write for new catalog.	73
519	**Metalab Equipment Corp.** Laboratory equipment.	19
520	**Miami Window Corp.** Aluminum windows.	11
521	**Minneapolis-Honeywell Regulator Co.** Automatic controls.	20 & 21
522	**Mississippi Glass Co.** Rolled, figured and wired glass.	6
523	**Mott Co., C. W.** Hammer knife mowers.	78
524	**Nesbitt, Inc., John J.** Heating and ventilating equipment.	8 & 9
525	**Owens Illinois: Kimble Glass Co. Sub.** Glass block and toplite panels.	12 & 13

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These cards are provided for the convenience of THE AMERICAN SCHOOL BOARD JOURNAL readers in requesting information on products, services, bookets, and catalogs offered by the advertisers in this issue.

May, 1958

THE AMERICAN SCHOOL BOARD JOURNAL
400 North Broadway, Milwaukee 1, Wis.

Please ask the manufacturers, whose code numbers I have encircled, to send me free information, catalogs or product literature as mentioned in this issue of the JOURNAL.

50	53	56	59	512	515	518	521	524	527	530	533	536	539	542	545									
51	54	57	510	513	516	519	522	525	528	531	534	537	540	543	546									
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SCHOOL PRODUCT GUIDE																								
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NEWS OF PRODUCTS FOR THE SCHOOLS																								
SPG-21	SPG-22	SPG-23	SPG-24	SPG-25	SPG-26	SPG-27	SPG-28																	

Also information on_____

Name_____

Title_____ School_____

City_____ Zone____ State_____

May, 1958

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SCHOOL PRODUCT GUIDE																								
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NEWS OF PRODUCTS FOR THE SCHOOLS																								
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Also information on_____

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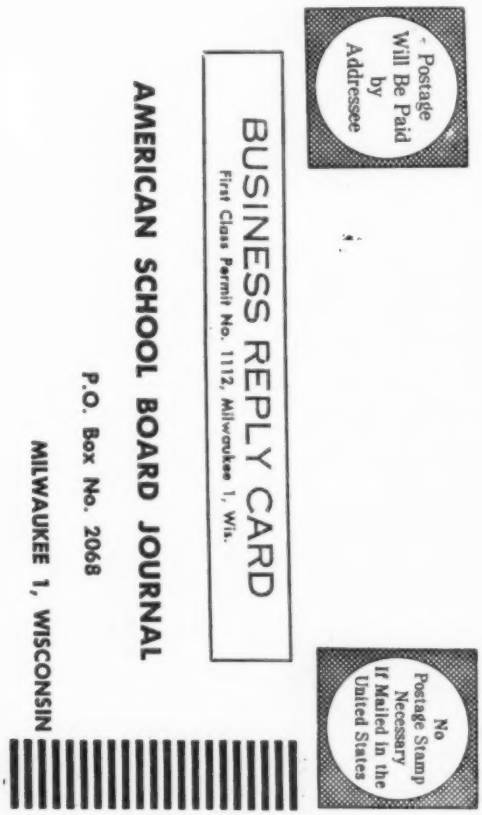
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AMERICAN SCHOOL BOARD JOURNAL
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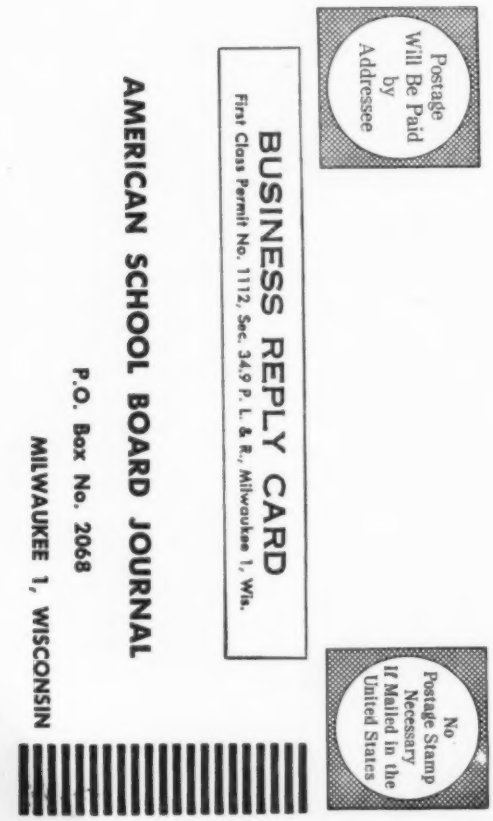
No Postage Stamp Necessary If Mailed in the United States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P.O. Box No. 2068
MILWAUKEE 1, WISCONSIN
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READER'S SERVICE SECTION

(Continued)

Code No.		Page No.
526	**Peterson & Co., Leonard.** Furniture for science laboratories.	65
527	**Pittsburgh-Des Moines Steel Co.** Steel deck grandstands.	75
528	**Powers Regulator Co.** Safer showers. Send for illustrated booklet.	2
529	**Powers Regulator Co.** Temperature control.	15
530	**Premier Engraving Co.** Quality engravings.	88
531	**Royal Metal Mfg. Co.** School furniture. Use coupon for information.	3rd cover
532	**Safway Steel Products, Inc.** Telescoping gym seats. Write for catalog 165.	7
	Seaporcel Metals, Inc. Panel fabricator.	USS Steel ins. bet. 69 & 72
533	**Shwayder Brothers, Inc.** School seating.	ins. bet. 60 & 65
534	**Sloan Valve Company.** Flush valves.	1
535	**Smooth Ceilings Systems** Flat slab construction systems.	68
536	**Southern California Plastering Institute** Genuine Lath and Plaster.	22
537	**Structural Slate Co.** Natural slate chalkboards.	72
538	**Superior Combustion Industries, Inc.** Steam generators.	80
539	**Taylor Co., Halsey W.** Fountains and coolers.	65
540	**Unit Structures, Inc.** Laminated wood construction.	69
541	**United States Steel Corp. (Cyclone Fence)** Fence and gates. Use coupon page 4 for information.	4
542	**United States Steel Corp.** Steel wall panels.	ins. bet. 69 & 72
543	**Universal Bleacher Co.** Roll-A-Way bleachers. Free catalog.	81
544	**Vacuum Can Co.** Coffee and beverage carrier-dispensers.	88
545	**Virco Mfg. Corp.** School furniture. Write for free brochure.	2nd cover
546	**Vogel-Petersen Co., Inc.** Wardrobe systems. Write for catalog SL-206.	82
547	**Wells Lumber Co., J. W.** Northern maple.	80

NEW PRODUCTS FOR THE SCHOOL

059	**Vacuum Can Co.** Sterilizer	86
060	**Griggs Equipment, Inc.** Teacher's Desk	86
061	**Azrock Products Div., Uvlade Rock Asphalt Co.** Vinyl Tile	86
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063	**Virco Mfg. Corp.** Banquet Table	86
064	**Oneida Products Div., Henney Motor Co.** School Bus	86
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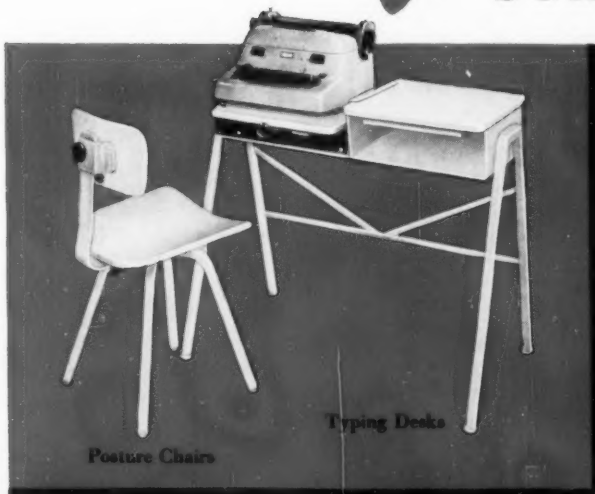
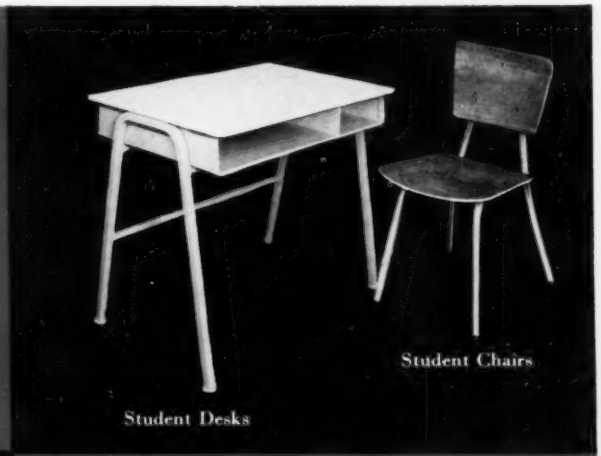
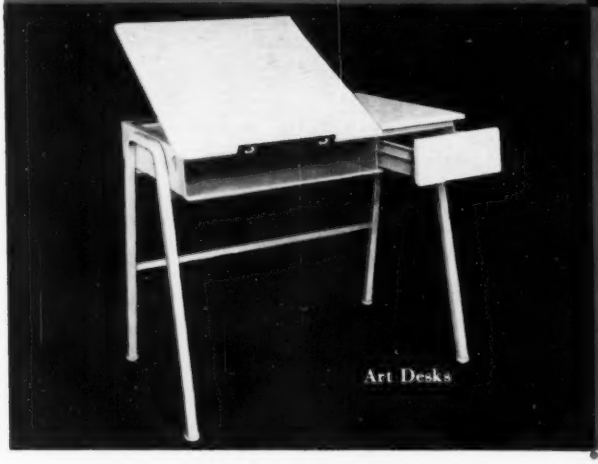
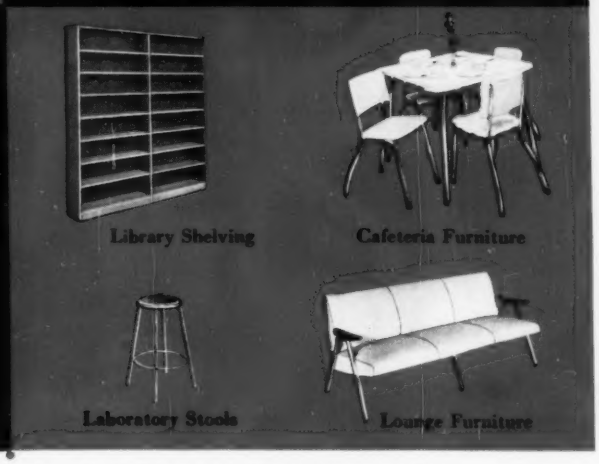
071	**Barber-Colman Co.** Bulletin	88
072	**American Air Filter Co.** Bulletin	88
073	**National School Equipment Co.** Brochure	88
074	**Hussey Mfg. Co.** Catalog	88

Royal®
SCHOOL FURNITURE









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Gentlemen: Send me information on:

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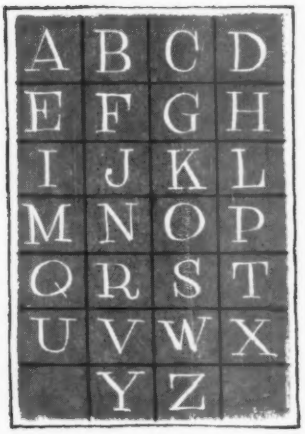

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